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The development and empirical validation of a model for
Christian education**

Korniejczuk, Raquel Bouvet de, Ph.D.

Andrews University, 1994

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Andrews University

School of Education

**STAGES OF DELIBERATE TEACHER INTEGRATION OF FAITH
AND LEARNING: THE DEVELOPMENT AND EMPIRICAL
VALIDATION OF A MODEL FOR
CHRISTIAN EDUCATION**

A Dissertation

Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

by

Raquel Bouvet de Korniejczuk

April 1994

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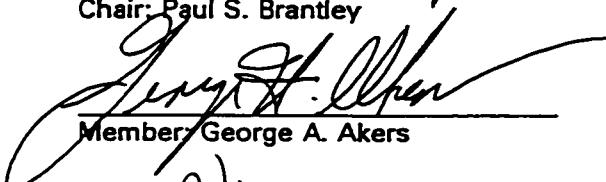
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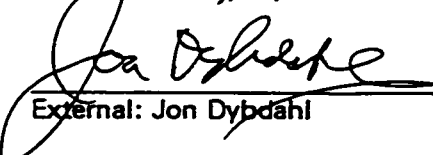

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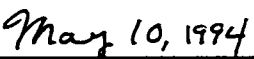

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ABSTRACT

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ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

School of Education

**Title: STAGES OF DELIBERATE TEACHER INTEGRATION OF FAITH AND
LEARNING: THE DEVELOPMENT AND EMPIRICAL VALIDATION OF A
MODEL FOR CHRISTIAN EDUCATION**

Name of researcher: Raquel Bouvet de Korniejczuk

Name and degree of faculty chair: Paul S. Brantley, Ph.D.

Date completed: April 1994

Problem

Research is lacking on the many ways the integration of faith and learning is accomplished by teachers. The purpose of this study was to develop a model of the process by which teachers integrate faith and learning in the formal curriculum. The model was validated by investigating to what extent the integration of faith and learning was deliberately accomplished by teachers in six Seventh-day Adventist secondary schools located in three South American countries.

Method

A multi-method approach involving questionnaire, interviews, and document analysis was used in order to study the process teachers experience in implementing integration of faith and learning in their classes. Triangulation

occurred as observation from one source was cross-validated with observation from other sources.

Results

The findings of this study support the notion of a stage model of implementation in which teachers find themselves in a continuum from no-interest, no-use, to dynamic collaboration.

Teacher knowledge of integration of faith and learning is an important factor in the implementation process of integration. Other factors such as interest, planning, difficulty of the subject, leadership, and social, cultural, economic, and religious environment of the school affect the implementation of integration of faith and learning.

Conclusions

1. Teachers integrate faith in the formal curriculum in different stages of implementation.
2. Factors such as theoretical knowledge of integration of faith and learning, its implementation strategies, interest, concerns, and difficulty of the subject influence the degree of teacher implementation.
3. Student involvement in the integration of faith and learning process is an essential but frequently overlooked ingredient in the implementation process.
4. Support from the school administration and the parochial educational system provide direction and incentive for teacher implementation.
5. National, social, and cultural forces, along with the religious background of students and teachers, all directly or indirectly influence teacher implementation.

DEDICATION

To

Victor, my husband and best friend,
and to Christian, Adrián, and Edgar, our sons.
They inspired my journey in Christian education.

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CHAPTER I

INTRODUCTION

From its own beginning Christianity has integrated faith with secular knowledge. The Jewish and Hebraic system of education in the synagogue incorporated Greek and Roman ideas of education. Thus, during the Middle Ages, the Reformation, and Colonization, educational institutions emphasized theology as the main subject, and other disciplines only facilitated human understanding of faith. According to De Jong (1990), "this traditional integration of faith and learning was all but destroyed after World War II" (p. 88). Secularism, humanism, and pluralism pervaded society, and even the *raison d'être* of church-related institutions was placed under question.

Ostensibly, it is the integration of faith and learning that distinguishes the Christian school from its public school counterpart (Wilhoit, 1987). In reality, however, the lines between faith and learning are often blurred in Christian schools. Some emphasize faith and diminish learning; others accentuate learning, relegating faith to an isolated corner of the curriculum.

In spite of the ambiguous relationship between faith and knowledge, there is consensus among Christians that Christianity has vitally important implications for every area of life and thought. In a secular, materialistic age, it is not easy to develop a Christian worldview. Sire (1976, 1979), Blamires (1963), Holmes (1983), and Walsh and Middleton (1984), among others, emphasize the importance of Christian thinking in the entire process of Christian life and practice.

The phrase "integration of faith and learning" is widely used in religious educational circles. Sometimes used as a slogan, its meaning tends to be distorted, diffused, or ambiguous.

The three elements of this expression warrant some discussion. Badley (1994) questioned the term "integration" in the context of the integration of faith and learning. For him, there are five possible meanings: fusion, incorporation, correlation, dialogical integration, and perspectival integration. "Fusion means that two (or more) elements flow or mesh together to become a new entity." Thus, the fused elements may or may not retain their own identity. "Incorporation seems to imply that one element disappears into the . . . other." Badley (1994) understood by dialogical integration "the high and continuous degree of correlation that we could properly claim a conversation had begun between two areas," and finally, "perspectival integration the entire educational enterprise is viewed from a specific perspective." He advocates the last meaning, perspectival integration, because it provides a worldview and pursues educational coherence.

Gangel (1983), although recognizing that the term integration is widely used, preferred the term "harmony" with the meaning of merging, blending, correlation, connection, association, and application. For him, integration is a process both in principle and practice, both philosophical and pedagogical.

In examining the terms "faith" and "learning," Withoit (1987) stated,

It seems obvious that the existence of the two terms, *faith* and *learning*, suggests two qualitatively different spheres of comprehension—something like the categories of apples and oranges—which we as master chefs or teachers are to prepare as a single satisfying concoction and to serve to our hungry students. (p. 78)

However, he defined faith and learning: "*Faith* is the area of personal communion with God—it values traits such as trust and love rather than precision of thought or emotional detachment," and "*learning* is represented by cautious

generalizations of philosophy or the carefully controlled inductive truths of empirical science.” Finally, he distinguished both terms by saying:

Put in another way, learning represents those things we can verify by the scientific method (such as water being made of two parts hydrogen and one part oxygen), while faith relates to those things we cannot test or rationalize (such as the concept that God is all powerful). Ultimately then, the difference between faith and learning is a question of *origins*—with faith representing the sphere of understanding as revealed by God in His Word, and learning representing the sphere of understanding as discovered and recorded by man. (p. 78, italics his)

An embracing definition of integration of faith and learning is provided by Gaebelein (1968): “It is the living union of its subject matter, administration, and even of its personnel, with the eternal and infinite pattern of God’s truth” (p. 9).

Sometimes integration of faith and learning is defined by contrast: what it is and what it is not. Heie and Wolfe (1987) distinguished between integration and pseudointegration. The difference between authentic integration and pseudointegration resides in that the former emphasizes “integral sharing” between the Judaeo-Christian vision and the discipline, whereas the latter focuses only on “integral commonalities.” Wolfe’s (1987) definition of integration emphasizes the process of the integration of faith and learning. Integration is “more about the *process of how truth is grasped* than it is about the ultimate unity of all God’s truth” (p. 5, italics his).

Rasi (1993) provided a definition that points out the process and the intentionality of the process. Integration of faith and learning is

a deliberate and systematic process of approaching the entire educational enterprise from a biblical perspective. Its aim is to ensure that students under the influence of Christian teachers and by the time they leave school will have internalized biblical values and a view of knowledge, life, and destiny that is Christ-centered, service-oriented and kingdom-directed. (p. 10)

Often integration occurs spontaneously only as a part of the teachers’ hidden curriculum. Teachers’ modeling and propitious, but sporadic relations between subject matter and spiritual issues are not sufficient to reach the desired integration.

A Christian worldview becomes operative only as teachers integrate these principles into practice at the classroom level and promote their integration in the student's life. Integration of faith and learning should pervade the formal, informal, and hidden curriculums of Christian schools and colleges.

Statement of the Problem

Literature on the importance of integrating faith and learning is abundant. Gaebelain (1968), Blamires (1963, 1988), Holmes (1975, 1977), and Akers (1977) emphasize the necessity for Christian schools to present the subject matter from the perspective of faith. Holmes (1975) and Heie and Wolfe (1987) present philosophical viewpoints on what it means to integrate faith and learning. But there is not a comprehensive model that addresses the questions: "What does integration of faith and learning actually mean in operational terms?" and "How do teachers help students to integrate faith and learning?" Describing the integration of faith and learning in terms of lofty platitudes offers little help with the task of implementation. In clear and operational terms, what does integration of faith and learning look like in the classroom and school? How is it done?

In spite of abundant literature supporting the integration of faith and learning on every level of education, no empirical research has been conducted on the many ways this integration is accomplished.

Without question, the most important manifestation of faith-learning integration is the daily life of the Christian teacher. But in addition to the hidden curriculum, Christian schools and colleges are charged with the responsibility of **purposely and consciously** making faith connections throughout the formal or planned program of study. To what extent is this latter responsibility carried out by Christian teachers?

In short, this dissertation addresses the need for information on the process of deliberate integration of faith and learning in the **formal** curriculum. An

operational model of the process of integration of faith and learning from the teacher's perspective can help the Christian educator better understand how the process is accomplished, and how it might be accomplished more effectively.

Purpose of the Study

The purpose of this descriptive study was to develop a model of the process of integration of faith and learning in the formal curriculum, and to validate it by investigating to what extent the integration of faith and learning was deliberately accomplished by teachers in six Seventh-day Adventist secondary schools located in three South American countries.

The objectives of this study were the following:

1. To develop a hypothetical paradigm of teacher integration of faith and learning based upon change and IFL theory
2. To describe the extent to which observations of teacher faith-learning integration conform to the paradigm
3. To compare the agreement of teachers' perceptions, students' perceptions, administrators' perceptions, and documentation relative to teacher integration
4. To explore the factors which appear to influence teacher integration
5. To develop a revised and validated model of the process of deliberate teacher integration of faith and learning based upon the above.

Theoretical Framework

As stated above, there is no model that represents teachers' deliberate process of integrating faith and learning. Thus, I developed a preliminary framework from two models: (1) The Concern-Based Adoption Model (CBAM) of Hall and Loucks (1978) for educational change providing the educational framework; and (2) Holmes's model of integration of faith and learning providing the philosophical framework.

Educational Framework

A growing body of literature in education relates to the process teachers go through in implementing educational ideas. Gene Hall and others presented the concept of the Concern-Based Adoption Model and its application in school improvement. Innovation Configuration represents the different ways individual users implement an innovation in their own setting.

Hord and others (1987) present how schools might go about successful improvement. They verified many assumptions about change, which were the basis of the model upon which the research was founded, the Concern-Based Adoption Model (CBAM). They concluded that:

1. Change is a process, not an event.
2. Change is accomplished by individuals.
3. Change is a highly personal experience.
4. Change involves developmental growth.
5. Change is best understood in operational terms.
6. The focus of facilitation should be on individuals, innovations, and the context.

Because the CBAM is a client-centered model, it can identify the special needs of individual users and enable the change facilitator to provide vital assistance through appropriate actions. This approach helps to maximize the prospects for successful school improvement projects, while minimizing the innovation-related frustrations of individuals.

Philosophical Framework

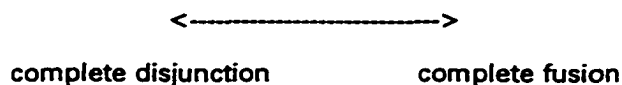
Holmes (1975, 1977) provided some philosophical bases for identifying levels of integrating faith in educational practice. In *The Idea of a Christian College* and *All Truth Is God's Truth*, Holmes presents the ways that teachers in a Christian school generally approach integration. Holmes's ideas (systematized by Akers,

1977) conceived four teaching models: (1) complete disjunction, (2) injunction, (3) conjunction, and (4) integration or fusion.

Complete **disjunction** occurs when the teacher keeps the worlds of faith and learning apart. Therefore, students get a distorted view of reality. If the teacher presents differences between the world of learning and the world of faith, or if there is any correspondence or dialogue between them, it is the **injunction** model. But still these are two worlds apart.

The **conjunction** model occurs when the teacher uses natural points of contact between religion and the subject, but the fusion is only partial, incomplete. The **fusion** is accomplished when the teacher offers one unified reality, and students get it in logical totality.

This set of models could be conceived as a continuum between two polarities: complete disjunction and complete fusion. The following graphic illustrates the concept.



Both poles of the continuum are hypothetical. Complete disjunction is impossible because, according to Clouser (1991), each subject matter has an underlying religious belief. Complete fusion is also hypothetical because of the impossibility of the human being to see the total wholeness of the truth, and the never-ending process of education (cf. White, 1903).

A description of both extremes of the integration of faith and learning process may clarify the concepts.

The absence of integration or **complete disjunction** is characterized by:

1. *Loss of focus in truth.* Instead of focussing on the truth, the center of education is hedonistic and pragmatic (e.g., to choose a particular profession because of the economical advantages, regardless of one's vocational interests).

Another main concern of the educational enterprise is developing professional skills, a training per se. It emphasizes only vocational skills, personal development, and unstructured "learning experiences" at the expense of truth. A dichotomy exists between the sacred and secular. Under this model the teacher presents the subject matter divorced of faith.

2. *Loss of universality of truth.* Truth is relative. Truth changes from time to time, from place to place, and from culture to culture. Truth is also subjective—everyone has his/her own truth.

3. *Loss of unity of truth.* This loss limits the quest of truth to the empirical methods of the natural sciences. The information is learned in a disjointed way: more and more of less and less. Specialization is the goal of each professional.

The ideal or **total integration** motivates emphasizing truth as fully as possible, and is characterized by:

1. *A focus on truth.* The worldview includes the biblical conception of nature, man, and history. The subject is just another disclosure of God. Teachers and students examine together the basic presuppositions of the textbook, class contributions, and prevalent ideologies, testing them by biblical principles to see whether they are Christian and can be accepted.

2. *Truth is universal.* Truth includes all subjects and pervades all disciplines. A Christian teacher cannot hide the truth, because the truth permeates all the thoughts and activities the teacher develops in and outside the classroom.

3. *Truth as unity.* All truth is God's truth. There is no dichotomy between sacred and secular. Christian teachers understand and present to students the wholeness of life. The Bible is incorporated in the curriculum as a unifying vision. The purpose of any educational activity is to learn to think Christianly about science, art, and human society. Though God may have a fully comprehensive and unified view of reality, we finite human beings do not. Even our hermeneutics and

theological methodologies are subject to the distortion and limitations of human interpretation and construction.

A Model of Deliberate Teacher Implementation of Integration of Faith and Learning

As a preliminary framework, I developed an operational paradigm of the integration of faith and learning based upon the Hord and others (1987) Concern-Based Model and upon the philosophical model of faith and learning proposed by Holmes.

My model is structured upon seven levels of implementation of deliberate integration of faith and learning. This is not a linear model. Although it represents stages of teachers' deliberate implementation in integrating faith into subject matter, it is not a sequential design of hierarchical stages. It may happen that a particular teacher fits in more than one level simultaneously, depending upon the subject or the theme he/she is teaching. A description of the levels follows:

Level 0: Non-Use

Level 0 includes teachers who are not aware of the possible underlying worldviews of the subject they teach, or having been made aware of that do not put forth any effort and/or have no intention to integrate the Christian worldview into the academic discipline.

Teachers in this level may think that the subject they teach is not related to religion, or if there is a relation, that the integration of faith and learning does not help to accomplish the mission of Seventh-day Adventist schools.

Level 1: Orientation

Level 1 includes teachers who are not systematically implementing their faith into their subject, but are interested in doing it. Teachers in this level of implementation have acquired, or are in the process of finding, information on how to relate the subject matter they teach with Christian beliefs. They are aware that

the Christian worldview should provide the perspective for the subject matter, but they do not know how to implement it in their classes. Teachers at level 1 may think that integration cannot be implemented at all levels of education, subjects, or topics.

This level also includes the teachers who are planning to introduce integration systematically in the future.

Level 2: Preparation

Level 2 includes those teachers who spontaneously, but sporadically, correlate Christian beliefs and values with the subject they teach, but have not yet incorporated this integration in the formal curriculum. They have acquired enough information, and are planning to implement it in the definite future and are taking the necessary preliminary steps to do it.

Level 3: Irregular or Superficial

Teachers at level 3 are conscious of the Christian worldview. From the Christian perspective, they comprehend what the ideal approach is to their subject matter, but some obstacles (i.e., time, management, resources, etc.) impede its systematic implementation. Therefore, the implemented integration is irregular and fragmented.

Another possibility at this level is that of superficial integration. Teachers use biblical themes or topics in conjunction with the subject matter, yet without any practical meaning (e. g., the use of the Proverbs of Solomon to teach a particular grammar lesson).

Level 4: Routine

Teachers at level 4 already have systematically incorporated their beliefs into their subject matter. Syllabi and objectives show the integration in a variety of ways: content, values, methodologies, etc. Although teachers recognize that some things can be improved, they are comfortable with the way they teach and have no

plans for change. For them, the integration of faith and learning is something the teacher must do, regardless of the students' reaction. Teachers at this level have accomplished a stabilized implementation.

Level 5: Refinement

At level 5, a systematic and ongoing implementation of integration is established. However, teachers shift the focus of integration from the teacher to the students. These teachers believe that the teacher is the cornerstone in the process, but that the integration should take place in the students' minds and lives. Therefore, teachers vary the strategies of integration according to the students' responses.

Level 6: Dynamic Integration

At level 6, teachers not only systematically incorporate Christian faith into their subject, and are concerned with the students' integration, but they collaborate with colleagues to improve integration. This regular collegiate activity proposes to provoke a collective and holistic impact on students. The whole school (or at least a group of teachers) provides a coherent Christian worldview and emphasizes student response.

Table 1 summarizes the hypothetical framework, describing the levels of implementation, their characteristics, and the Holmes/Akers equivalent.

Importance of the Study

Although much has been written on the role of the teacher in the integration of faith and learning process, no empirical study has examined the process of teachers' deliberate implementation of integration of faith and learning in the formal curriculum.

This study attempted to bridge the canyon between faith and its implementation by analyzing teachers, students, and administrators in the process of implementing faith and learning. Factors relating to the process of deliberate

Table 1

*Levels of Deliberate Teacher Implementation of Integration Faith and Learning:
Hypothetical IFL Implementation Model*

Level of Use of IFL	Characteristics	Correlation with Holmes/Alers model
<i>Level 0: Non-use</i>	<p>Teacher has little or no knowledge of IFL.</p> <p>Teacher is doing nothing towards becoming involved in IFL.</p> <p>Teacher has no intention of becoming involved in IFL.</p> <p>Teacher is not convinced that IFL is the answer for accomplishing the mission of Christian schools.</p> <p>Teacher thinks that the subject he/she teaches is not related to faith (religion).</p>	Disjunction
<i>Level 1: Orientation</i>	<p>Teacher has acquired or is finding information on IFL, and/or has explored its value orientation and what it will require.</p> <p>Teacher is aware that he/she should incorporate Christian faith into learning.</p> <p>Teacher does not know how to find and implement a Christian worldview in his/her class.</p> <p>Teacher thinks that it may be worthwhile to do it in the future.</p> <p>Teacher thinks that IFL can be implemented in some, but not all levels, or subjects, or topics.</p> <p>Teacher is definitively taking the initiative to learn more about it.</p> <p>Teacher is planning to implement it in the indefinite future.</p>	
<i>Level 2: Preparation</i>	<p>Teacher is preparing to begin IFL for first time.</p> <p>Teacher plans to begin using it in a definite time.</p> <p>Teacher is taking steps to get ready to use it.</p>	

Level 3: <i>Irregular use</i>	<p>Teacher attempts to incorporate IFL but the problem is management, time, resources, etc.</p> <p>Teacher is aware of how IFL should be ideally, but is not able to use it in that way yet.</p> <p>IFL is meeting more teachers' needs or concerns than students' needs.</p> <p>It is a superficial use, because teachers utilize biblical themes or topics without coherence or meaning.</p> <p>The implementation of IFL is occasional.</p>	Injunction
Level 4: <i>Routine</i>	<p>There is a stabilized use of IFL, but no changes are made in its ongoing use. No preparation to improve IFL.</p> <p>Syllabi and objectives show IFL in some themes.</p> <p>Teacher recognizes that some things can be improved but he/she does not plan to do it.</p> <p>Teacher does only minor adjustments in patterns of use.</p> <p>No coherence in the Christian worldview. Use of prayer, little homilies.</p> <p>IFL is based on the teachers' talking, rather than student response.</p> <p>No progress in the IFL process.</p>	Conjunction
Level 5: <i>Refinement</i>	<p>Teacher varies the implementation of IFL to increase impact on students.</p> <p>Teacher can describe changes that he/she has made in the last months, and what are short-term plans.</p> <p>Changes of strategies and themes in IFL are made because of the benefits of students.</p>	Integration or fusion
Level 6: <i>Dynamic Integration</i>	<p>Teacher talks with colleagues on ways to improve IFL. Regular collaboration between two or more teachers. The collegial activity in IFL has the purpose of provoking a collective impact on students.</p> <p>Teacher feels that he/she is experiencing a growing capacity to make a difference in the lives of his/her students. Teacher thinks that IFL and teaming provides the best possible vehicle for doing that.</p> <p>The whole school (or at least a group of teachers) provides a coherent Christian worldview and emphasizes student response.</p>	

integration of faith and learning may help teachers to understand what they can do to advance the process of implementing integration in their classes. Students can discover the role they play in the integration process, and educational administrators and church leaders may identify ways to provide an appropriate supportive environment where integration can flourish.

Definition of Terms

1. *Integration* is the process of combining separate components into a unified whole.
2. *Faith* is trust and relationship with God. It involves three elements: (a) the truth, (b) a willingness and commitment to obey God, and (c) feelings and emotions in experiencing God.
3. *Learning* consists of those experiences designed to help students acquire/modify knowledge, attitudes, skills, and other forms of intellectual functioning.
4. *Integration of faith and learning (IFL)* is the process of infusing the formal, informal, non-formal curriculum with a God-centered, Christian worldview.
5. *Integral formation* is the process of providing/acquiring a balanced education that comprises the development of spiritual, social, mental, and physical facets of the human being.
6. *Deliberate teacher integration* is the process of consciously infusing the formal curriculum with a God-centered, Christian worldview.
5. *Stages* are steps in the process of teacher implementation. They also can be defined as periods in the development of teacher implementation.
7. The *IFL Model* is a conceptual framework which graphically represents the process of the integration of faith and learning.

8. *Christian education* in this study is restricted to schooling purposely based upon religious beliefs of Christianity. Christian education includes a biblically oriented curriculum and the teaching of Christian beliefs.

Delimitation of the Study

Although I recognize that the integration of faith and learning is a pervasive process, encompassing the hidden (spontaneous) and non-formal aspects of the school program, this study was delimited to the integration of faith and learning accomplished by teachers in the **formal** curriculum. It does not examine integration in the informal or hidden curricula. However, in the complex and symbiotic relationship among all aspects of curriculum, it is sometimes difficult to isolate only one facet of the curriculum. This is particularly true in the subtle interplay of the formal and hidden curriculum in implementing faith and learning.

Limitation of the Study

The population for this case study comprised six diverse Seventh-day Adventist high schools in three South American countries. For this reason, statistical generalization is impossible. However, the basic concepts in integration of faith and learning transcend national and ecclesiastic boundaries. This study represents a preliminary development of a construct which subsequently may be tested in other environments.

Organization of the Dissertation

This dissertation is organized in five chapters. Chapter 1, Introduction, identifies the problem studied, provides general information supporting the need for the study, states the objectives and importance of the study, defines important terms used in the study, provides the theoretical framework upon which the dissertation is based, and establishes an overview of the remainder of the study.

Chapter 2, Review of the Literature, is divided into three sections: (1) integration, (2) the relationship between philosophy and subject matter, worldviews,

and literature on the integration of faith and learning; and (3) research studies on teacher change, featuring the CBAM model.

Chapter 3, Methodology, presents the procedures employed in obtaining the information needed for this study. Because this study required a multi-method approach, this chapter describes the different methodologies utilized, the instruments used to collect data, and the methods of data collection and analysis.

Chapter 4, Data Findings and Analysis, describes and analyzes information from existing sources, presents the findings, and interprets the results.

Finally, chapter 5, Summary, Implications, and Recommendations, summarizes the study, discusses the results, and suggests implications for further research.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter reviews selected literature in three areas: (1) integration, (2) integration of faith and learning, particularly implementation of integration, and (3) teacher change, particularly the CBAM model.

Integration

One of the three criteria that Tyler (1949) thought should be considered as a guide to organizing learning experiences is integration. According to him, "integration refers to the horizontal relationship of curriculum experiences" (p. 86), and these experiences should be organized in such a way as to help students formulate an increasingly unified view, and to behave accordingly.

Although the St. Olaf College Self Study Committee (1956) did not define "integration," the utilization of the term suggests similarities with Tyler. They presented a review of integrating factors in education throughout the ages. According to them, in early Greek education, being a good citizen was the main integrating factor in education. This integration dissolved with sophists, who sustained personal advancement and individual success instead of social services and public usefulness. Early Roman education also was founded on the integrating aim to be a virtuous person: good citizen, soldier, and worker. Christianity gave a new meaning to life and new objectives to education.

Thus it came about that the early Christian educators took over from the Romans the Seven Liberal Arts (Trivium and Quadrivium) and made them the basis for all later medieval higher education. Through these seven liberal arts the medieval educators hoped to give their students a synthesis or an integration of the essential learning that had been salvaged from the classical world. (p. 15)

During the Middle Ages, integration, synthesis, and order were the goal of education based upon authoritatively given goals and methods, but this aim degenerated towards the end of the Middle Ages, when the process of disintegration and fragmentation started with the overflow of new interests.

The aim for education in the early modern age was actualizing humanity in every individual, based upon reason as the principle of truth. Integration was not discussed because autonomous reason and the principle of automatic harmony were already in the mind of mankind. Integration or harmony could be left to take care of itself. As the Industrial Revolution began in Western Europe, bringing such political changes, as democracy, profound transformations occurred in society and education. Reason was no longer the principle of truth and justice, but a tool in the service of the gigantic industrial civilization. Classical and theological patterns of integration were utilized in only a few of the private church-sponsored colleges. Positivist natural sciences and anthropological social sciences developed education for democracy, which integrated nationalistic and economic ideals.

The first American universities struggled between two models of higher education: (1) the German model that promoted freedom of research and freedom to teach, and supported doctorate degrees; and (2) the English model that promoted the extension of knowledge rather than the advancement, was slow to promote research, and emphasized B.A. degrees. Although American universities did not attempt to eradicate disconnection of subjects, in general, education toward technology satisfied the search of the individual for purpose and unity in life.

The contemporary school curriculum is described by Oppewal (1985) as a "curious mixture of the old and the new, with contenders always jostling for a more prominent place in the school day" (p. 20). The problem of education is how to harmonize this cacophonous symphony. This harmonization is accomplished through

integration. "Without this integration, the curriculum will be nothing more than a dumping ground for unrelated facts" (Wilson, 1991, p. 59).

During the last few years, curriculum designers stated the need of curriculum integration for several reasons: (1) the growth of knowledge that force curriculum designers to select what should be taught, and what can be eliminated from the curriculum, (2) fragmented schedules that divide the learning process in arbitrary blocks of time, which do not consider the needs of students, and (3) the relevance of curriculum shown by active and natural linkages between fields of knowledge (Jacobs, 1989, pp. 1-6).

In the field of Christian education, the problem of integration is different from that of secular education. Secular education is looking for the integrating factor, whereas Christian education already has this factor (Gaebelein, 1968). The integrating factor in Christian education is God and the Bible. The problem of integration for Christian education is the application of this integration (p. 11).

Integration of Faith and Learning

In discussions of how the Christian perspective embraces reality, and more specifically, education, not everyone uses the term integration of faith and learning. Some speak of "worldviews," others prefer talking about the "Christian mind," and a third group accepts the use of "integration of faith and learning."

Blamires (1963) distinguished the secular mind from the Christian mind.

To think secularly is to think within a frame of reference bounded by the limits of our life on earth. . . . To think Christianly is to accept all things with the mind as related, directly or indirectly, to man's eternal destiny as the redeemed and chosen child of God (p. 44).

He used the word "mind" as a "collectively accepted set of notions and attitudes" (p. vii). Blamires believed that the Christian mind does not exist, and challenged Christians to develop the Christian mind based upon the characteristics he described in the second part of his book. To him, "the Christian mind is the

prerequisite of Christian thinking. And Christian thinking is the prerequisite of Christian action" (p. 43).

Blamires's ideas in *The Christian Mind* were later fostered in *Recovering the Christian Mind* (1988). Gill (1989) presented his readers with the challenge of preserving a Christian mind and attitude of discipleship in today's pluralistic and secularistic world. He, addressing college and university students, practically described how to develop a Christian mind. Barclay (1985) stated that Blamires's definition of the Christian mind is too theoretical, and concluded that this is the reason why there is no Christian mind. Barclay's definition of the Christian mind was more biblically oriented. He noted: "By a Christian mind I believe the Bible means 'a Christian outlook that controls our life and our thinking'" (p. 15). And he presented biblically based suggestions in the development of the Christian mind.

Sire (1990) stated that "the Christian mind does not begin with a world view, not even the Christian world view. It begins with an attitude. Granted that attitude is rooted in the Christian world view" (p. 15). The attitude to which he is referring is Jesus' attitude: humility. According to Sire, the Christian mind can be reached by being disciples of Jesus, and by approaching knowledge, culture, and history from a Christian perspective.

A fresh analysis of the old debate between knowledge and faith is presented by Holmes (1971), who discussed the relationship between "Christian thinking" and different contemporary approaches to knowledge.

One of the clearest approaches to a Christian worldview was presented by Walsh and Middleton (1984). After analyzing the definition of a worldview and how to achieve a Christian and biblical worldview, they explained the relationship between a worldview and academic discipline or scholarship. For them, a worldview is a pretheoretical view of the totality of reality, based upon faith or beliefs, because all theoretical analysis occurs in the context of a philosophical

paradigm. This worldview determines the philosophical paradigm that supports the academic discipline. Any academic discipline takes on an aspect of reality, whereas the philosophical paradigm takes on the totality of reality (pp. 169-172).

Simple and clear introductions of different worldviews were presented by Sire (1979, 1990), Knight (1989), and Pazmiño (1992) along with critiques and perspectives from Christianity.

Holmes (1977) presented eight characteristics of a worldview expanded recently in *Contours of a World View* (1983): (1) holistic or integrational; (2) exploratory, or open system; (3) pluralistic, that is, an open-ended exploration; and (4) confessional and perspectival.

Sire (1990) supported that a worldview analysis provides three bases for integration:

1. "World view analysis allows one to *discover* and *examine* the underlying presuppositions of every academic theory and every discipline" (p. 155).
2. "A world view analysis allows Christians to identify the biblical presuppositions that can undergird proper scholarship" (p. 156).
3. "A world view analysis provides the basis for interdisciplinary studies. Real questions we need to ask and answer about God, human beings and the universe are not going to be answered exhaustively by any one academic discipline" (pp. 156, 157).

Coming to the educational field, different aspects of the history and mission of American Christian schools presented by Ringenberg (1984), Van Brummelen (1986), Carpenter and Shipps (1987), and Carper and Hunt (1984) shared the purpose and commitment of engendering a distinctly Christian worldview in their students and communities. The history of American Christian schools shows the struggle with secularization and recovery of the schools' distinctive mission. As expressed by Ringenberg (1984),

a Christian college is a community of Christian believers, both teachers and students, who are dedicated to the search for an understanding of the divine Creator, the universe that he has created, and the role that each creature should fill his universe. The titles of the specific courses may not differ from those in a secular college. What does differ dramatically, however, is the attitude with which Christian scholars approach their areas of investigation. To Christian learners, all truth is God's truth, and the pursuit of it is a spiritual quest to understand God better. (pp. 215, 216)

De Jong (1990) diagnosed the present situation of contemporary church-related colleges, analyzing how they lost their *raison d'être*, and how they can recover their mission. Thus,

the total college experience is a process of putting knowledge and skills into the context of a value system, articulating that knowledge, those skills, and the value system into the students' visions of themselves and their world. The result is a fulfilling life, one in which continued openness and enlargement are enjoyed throughout life. (p. 141)

Worrel (1950) talked about the "harmony of science and Scripture" (p. 26); since all things are of God, He is the source of all knowledge and wisdom. To him, "the basis for Christian education is found in the Scriptures that reveal God Himself as the Sublime Educator" (p. 32).

Gaebelein (1968) stressed that "Christian education can achieve integration into the all-embracing truth of God" (p. 8). He analyzed three components in the integration. The first component is the teacher. Regarding the process teachers go through in carrying out the integration, Gaebelein said,

When he [the teacher] became a Christian through regeneration, he did not instantaneously receive a completely developed world view; rather it was implanted in germ or in embryo. Just as there are believers who exhibit little growth . . . , so there are others who, when it comes to the development of a consistent frame of reference, remain comparative infants. On the other hand, there are some who do grow. To expect achievement of this kind from all Christian teachers is obviously impossible. But it is not only possible but also quite reasonable to expect of Christian teachers a world view intelligently understood and held with conviction. (pp. 43, 44)

A second element of Gaebelein's book is that of subject integration. He expressed that there are some subjects which are more difficult to integrate than

others. The hardest is Mathematics, with Literature and History ranking as the most easy and natural.

As the third vital element in integration, Gaebelein targeted the school atmosphere, an atmosphere that extends beyond the classroom. This includes all extracurricular activities, namely cultural programs, band, choir, athletics, student discipline, chapels, and even brochures that promote Christian education.

Gaebelein's model of integration is a challenge for Christian teaching because it is "hard work." However, "it is a glorious work," because it deals with the formation of "growing human souls" (p. 108).

De Jong (1989) agreed with Gaebelein on the unity of integration of faith and learning. He pointed out that frequently Christians think in "clusters," and that they tend to separate faith from knowledge so that faith is connected with religion and knowledge is connected with science, but there is no relationship between all elements. Therefore,

the greatest challenge facing Christian education today is that of discovering the unity of all that is known, of formulating for our children a single mental vision, of bringing every tidbit of interpreted fact and every theory of explanation into subjection to Christ (p. 46).

Holmes (1975) emphasized the importance of the "climate of faith and learning." He said that values are transmitted "more from example than from precept, more from their peers than from their elders, and more by being involved than by being spectators" (p. 82). Moreover, teachers are keys to a climate of learning. They can inspire students, and students can inspire other students; thus a climate of learning emerges. "It is important that the teacher be transparently Christian as well as an enthusiastic and careful scholar, and that he not compartmentalize the two but think integratively himself" (p. 83).

Integration of Faith and Learning in the Formal Curriculum

Jaarsma (1953) published a collection of readings on Christian education. Section three of his book deals with the organization and implementation of the program of Christian education. His Christian view of the curriculum stressed the Bible as a center of the curriculum, and the continuity and coherence of learning. Jaarsma gave three suggestions for the implementation of integration into the curriculum:

First, the Christian view of learning makes the teacher-pupil relationship basic to the pupil-curriculum relationship. Second, curriculum coherence demands unified areas of learning in keeping with the fullness of life if acceptance of life in the heart is to be achieved. Third, the Scriptures must permeate unified areas of learning with their perspectives and mandates. (italics his, pp. 258 - 260)

Jaarsma recognized the scriptural basis for the curriculum in Christian schools, based upon love, faith, and obedience, and suggested areas of coherence within the framework of the set-up. He did not encourage a completely new organization of the curriculum, neither fusion of areas, but coherence and meaningfulness. He explained,

I am advocating a continuity representative of life. If maturity is characterized by the acceptance of life from the heart, if the school aims at maturity, then the school must deal with life. Christian education is concerned with the acceptance of life as viewed from the Scriptures. It too must lead the learner to understand life coherently. Life cannot be understood any other way. It is not accepted, as we saw, in the heart in compartmentalized form. (p. 262)

Therefore, according to Jaasma, one of the first principles to guide the design of the curriculum for elementary and secondary schools "is the fact of the unity of life in the individual and in the collective whole" (p. 277). After presenting the antithesis of Christian education vs. non-Christian education, the author pondered that it is easy to represent that antithesis on paper, but "when we go to work on the educative process itself, this paper work is not always so obvious" (p. 459).

Two years after the work of Jaasma, a book edited by Rupert Davis (1956) compiled a series of essays dealing with the relationship between academic disciplines and Christianity. Although the book does not provide concrete ideas for implementing Christian faith, it gives the reader Christian viewpoints to present academic disciplines.

The relationship between the subject and the individual during integration was discussed by the St. Olaf College Self Study Committee (1956). He explained that the more personal sciences are closer to the humankind than the abstract sciences, because they assumed that the person is a believing, worshiping, loving, acting, knowing, and creative creature of God. Therefore, they ranked the sciences from close to far proximal association from the human being as follows:

1. Theology
2. Philosophy
3. Literature
4. Fine Arts
5. History
6. Social Sciences
7. Natural Sciences
8. Logic, Language, Mathematics (the basic symbolisms) (p. 115).

The St. Olaf College Self Study Committee (1956) clearly addressed the locus of integration. It stressed the primacy of students in the task of integration. "However cohesive the curriculum and however related the teaching, integration must nevertheless be achieved by the student himself. Otherwise educational integration is a failure" (p. 117). The task of the college, accomplished by teachers and curriculum is twofold: (1) to incite the expectation of relatedness in learning, and (2) to facilitate educational integration (p. 118).

For Miller (1960), the implementation of integration is an "experiment" in higher education institutions. He described two conditions that need to take place to allow for the integration of faith and learning: first-rate quality education and constant support.

1. It is not possible to conduct a fruitful experiment in the relation of Faith and Education unless the education be of first-rate quality. At any lower level no useful lessons will be learned.
2. There can be no illusion about the fact that a dedication to this kind of work in our Christian colleges will require an arduous and sustained "selling job" among the supporters of the schools. (pp. 179, 180)

The problem of the relationship between theory and practice in the foundation of religious education is presented by Burgess (1975). His intention is to connect theory and practice in religious education, and to take some steps in solving the problem of establishing a scholarly foundation. He examined the theoretical literature in religious education and identified four approaches: the social-cultural approach, the traditional theological approach, the contemporary theological approach, and the social-science approach. Burgess confronted the mentioned theoretical approaches with practical categories of religious education such as aim, content, teacher, student, environment, and evaluation. Burgess called the attention of religion teachers to become conscious of the relationship between what they intend and what they do.

A concrete and serious effort for introducing a college level curriculum that is founded upon the Christian philosophy was carried out in the late 60s by the Calvin College and reported in the Christian Liberal Arts Education, by the Calvin College Curriculum Study Committee (1970). The report presents a rationale for Christian liberal arts education, a suggested curriculum design that was tested for two years, a Christian perspective for each subject, and the desired outcomes in students. In short, the attempt of the curriculum committee was to present in a practical way how the aim of Christian education, which is to educate students to

live a Christian live, can be accomplished in the formal curriculum of a Christian college.

Beverluis (1971), in a small book sponsored by the National Union of Christian Schools, proposed a radical simplification of educational philosophy for Christian schools. He tried to respond to what Christian schools should be aiming to do, why this is so, and what major strategies they should follow. Speaking about the selection of curriculum in Christian schools, Beverluis said that

curriculum must be chosen that prominently presents the human condition, the human drama, the human situation. In all sorts of curriculum encounters, whether in history or the arts, in politics or economics, or in religion, human actions must be traced to values and values to ultimate allegiances. (p. 67)

Beverluis described the role of the teacher and student in relation to the curriculum. He emphasized the importance of the participation and interaction of students, the curriculum, and the guidance of teachers. Christian education takes place when, in response to the curriculum and guided by the teacher, the student becomes compassionate, interacts with life, and discovers not only theoretically but practically how religion and individual are interrelated.

Addressed to undergraduate students, Smith's edited book (1972) attempted to guide students in their journey through college, and assured that "Christianity and scholarship comprise two sides of the same coin of God's truth" (p. vi). The book is organized into three academic areas: humanities, social sciences, and natural sciences, where the author of each essay presented a Christian philosophy that undergirded each subject.

Oppewal (1985) distinguished two ways of integration in the formal curriculum: (1) forming a Christian interpretation or assessment of secular subjects; and (2) placing the subject matter across the academic disciplines, so that the content is interdisciplinary, the Christian perspective is operated at the level of organizing the topic, and the inclusion of biblical materials is part of the subject (p. 21).

Malik's critique of the university (1982) suggested to see the university from Christ's viewpoint. He found that the contemporary university is estranged from Christ, and proposed the creation of an "Institute" to control and critique the university from a Christian point of view.

Herbert W. Byrne (1977) attempted to present a coherent bibliocentric approach to the problems of education. He stressed the importance of having a clear Christian philosophy in education to guide the curriculum in Christian schools. Byrne pointed out several ways that Christian philosophy could help education:

(1) by providing a world view which gives unity, (2) a philosophy of life which gives meaning, (3) emphasis on true values and objectives which give purpose and direction, and (4) systematization of content by showing relations and interrelations in the totality of truth which provides a workable pattern for the curriculum. (p. 64)

Byrne sustained that Christian philosophy has implications in the educative process: in the nature, aims, and objectives of education as well as in teacher-pupil relationships, in the curriculum, and in the methods of education. Regarding the curriculum, the author summarized the Christian view of the curriculum as Christ-controlled, pupil-related, socially applied, and Bible-integrated. Byrne criticized contemporary Christian education at Christian liberal arts schools and Bible schools by saying that Christian teachers are teaching their subject matter with a secular frame of reference. "Few Christian teachers have learned to use the implications of the Christian philosophy of life as contained in the Bible as a direct guide in the teaching-learning process" (p. 181). In response to this statement, in section three of his book, Byrne took into consideration how various academic areas can be integrated, organized, and prepared to be used in the classroom from a Christian view of the truth.

Gangel (1983) discussed the implementation of the integration of faith and learning in the Bible college curriculum. Bible colleges have different objectives than do Christian liberal arts colleges. They focus on vocational Christian service,

and the core curriculum relies on Bible and Theology; therefore the integration presented by different authors on the 15 subjects included in Gangel's book presents biblical foundations for the subject, philosophical formulations, and practical applications of integration. The integration they pursued, and the role of the teacher and students in the process of integration, is better described in the introduction of the book written by Wendell G. Johnston.

An educational philosophy that involves the integration of the Bible into all of life and learning is both exciting and challenging for faculty and students alike. . . . Faculty are not automatically equipped to teach in an integrated manner because they have graduated from a Christian college or seminary. Unfortunately, there are very few Christian graduate schools that teach the concept of integration and, thus, most faculty members are left on their own to develop this important concept as they teach their students. Students also must be taught how to evaluate and integrate, a goal which cannot be accomplished by a superficial understanding of the Bible. (p. xix)

Akers and Moon (1980a, b) provided a clear rationale for implementing IFL in the formal curriculum and practical ideas on how to implement it as well. They analyzed the role of the teacher in the process of implementing IFL, the inclusion of IFL in the course plan and the most effective methodologies to promote integration in student's lives.

Integration of Faith and Learning Institutional Efforts

Some attempts to present how the integration appears in different disciplines were made by diverse institutions. Crenshaw and Flanders (1984) edited a compilation of essays written by professors of the Central Methodist College who emphasized the importance of providing a value-centered education in a Christian college. Teachers from different disciplines provided rational and practical considerations for the inclusion of Christian values in the academic disciplines. Liberty University delivered a book edited by David Beck (1991) that attempted to set "a model for accomplishing the reopening of the American mind to absolute truth, absolute values, and the Bible as God's revelation. It is an attempt . . . to

integrate our belief in God's infallible and inerrant revelation in Scripture with the various disciplines in the university" (p. 8).

Christian College Coalition and Harper Collins Publishers have been publishing, since 1986, a series of supplemental textbooks called *Through the Eyes of Faith* to provide college students with a Christian perspective on various disciplines in the liberal arts curriculum (Best, 1993; Fraser & Campolo, 1992; Gallagher & Lundin, 1989; Myers & Jeeves, 1987; Wells, 1989; Wright, 1989).

Integrating the Faith (1987), edited by Moser and Schmidt, is a 6-volume teacher's guide for organizing curriculum in Lutheran schools, and provides suggestions to help teachers integrate faith as they teach.

The *Institute for Christian Teaching*, an institution sponsored by the Seventh-day Adventist Church, offers seminars and develops resources to foster the integration of faith and learning in Seventh-day Adventist schools, colleges, and universities. The institute publishes the series *Christ in the Classroom* which gathers monographs on college and university academic and professional topics, that are developed by the participants to faith and learning seminars organized by the institute. Volume 9 of the series compiles a selected bibliography on the integration of faith and learning.

Christian Schools International is a major institution that provides materials for teachers and students from a Christian perspective.

Calvin Center for Scholarship, as well as *Wheaton College*, publishes books and monographs on different aspects of integration, and offers seminars and forums for the discussion of the mission, purpose, and implementation of integration at the college level.

Another institution, located in Canada, is the *Institute for Christian Studies* that gathers scholars interested in research not only in North America, but in other continents as well.

Practical Suggestions on Implementation of Integration in the Secondary Curriculum

Steensma and Van Brummelen (1977) attempted to provide a biblical view of the school curriculum in a Christian school, particularly at the elementary and secondary level. They based the Christian curriculum content selection on:

- (1) the relation of the Bible to that discipline; (2) the meaning in the aspect of life investigated by that discipline; (3) the method of inquiry used by that discipline; (4) the interrelation of other academic disciplines with that discipline; (5) the implications of the above four topics for the elementary and secondary curriculum. (p. 16)

According to Steensma and Van Brummelen, the selection of content and the organization of student-learning experiences in each subject matter should be based on the Bible. Although the Bible does not offer formulas for the selection of content and organization of learning experiences, "the study of the Scriptures provides an understanding of the theme of the Creation, Fall, Redemption, and Kingdom of Christ, and of man's place and task in the world" (p. 17). The authors explained that in secondary education the differentiation between disciplines should be more developed than in the elementary curriculum. Several authors offered proposals of integration in different disciplines. An appendix offered concrete examples of unit integration in several courses.

The issue of intentional implementation of faith and learning in the curriculum is well presented by Fowler (1990). He introduced the idea that the mere intention of wanting to be a Christian school is not enough. "The first, and most important, question in the pursuit of Christian schooling, is: To what extent is our practice of schooling, in spite of our intention to be Christian, distorted by the influence of our cultural environment?" (p. 42). Fowler replied that if Christian beliefs that supported Christian schools are distorted by the cultural environment, teaching and curriculum will be distorted. "The question is not what do we intend, or what do we say about what we are doing. The question is: What gives shape to our practice?" (p. 42). In Fowler's edited book, Van Brummelen (1990a, b, c)

discussed the role of students, teachers, and curriculum in the implementation of integration. He places on students the responsibility of bearing the image of God. Christian teachers accomplish three functions: guiding, unfolding, and enabling. The guiding function involves modeling in discipleship in such a way that invites students to follow Jesus. The unfolding function means to "open up to our students what they as yet do not know and what they as yet cannot do" (p. 160). It is to understand student psychology and learning styles, and to be able to adjust teaching accordingly. The enabling function means "to provide the student with the knowledgeable competence and willingness to function as an effective disciple of the Lord in the world today" (p. 160). According to the author, this function is the ultimate goal of Christian education. Regarding the curriculum, Van Brummelen sustained the impossibility of a neutral curriculum, and explained that the implementation of integration of faith and learning in the curriculum is more appropriate at unit level (p. 182) than at goal or daily lesson-plan levels. He presented practical examples of integrative interdisciplinary units for elementary education.

The South Pacific Division of the Seventh-day Adventist Church published a series of *Curriculum Frameworks* (1990) that offers practical ideas on how to integrate Christian values in the curriculum. The guide for each subject contains a (1) clear statement of Christian assumptions that undergird the subject, and (2) examples of Christian values that can be integrated with different themes as well. These frameworks are used currently in Seventh-day Adventist schools in Australia and New Zealand. Spanish translations of this material are available to Spanish-speaking countries through the *Institute for Christian Teaching*.

Research on Integration of Faith and Learning

Few studies investigated the reality of integration in Christian education. The Search Institute conducted a major study on Christian education of Protestant

organizations (Benson & Eklun, 1990). The study included 11,000 individuals in 561 congregations of six major Protestant denominations (Disciples of Christ, Evangelical Lutheran Church in America, Presbyterian Church [U.S.A.], United Church of Christ, and the United Methodist Church). The sample was comprised of adolescents, pastors, teachers, coordinators of Christian education, and other adults. The survey was based on faith, loyalty, religious biography, congregational life, and the dynamics of formal Christian education programming.

Christian education includes Sunday school, church school, Bible studies, confirmation, camping, retreats, workshops, youth ministry and youth groups, children and adult choirs, auxiliaries for men and women, prayer groups, religious plays and dramas, Vacation Bible School, new member classes, and intergenerational or family events and programs. (pp. 2, 3)

Although this study focused on faith maturity mainly in church education, some findings are related to the effectiveness of Christian education and the integration of faith and learning process in school setting. Some of the most outstanding findings are the following:

1. "Involvement in effective Christian education has as positive a benefit for adults as it does for adolescents, in part because faith development is best understood as a lifelong process" (p. 53).
2. Effectiveness factors can be grouped using the same categories of academic learning: teacher characteristics, pastor (or principal) characteristics, educational process, educational content, peer interest in learning, and goal or objectives (p. 53).
3. An effective educational process relies not only in the traditional sense of transmitting knowledge, but emerges from experience (p. 54).
4. Effective programs for adolescents require strong educational expertise on the part of teachers (p. 54).

5. "Effective content for . . . adolescents blends biblical knowledge and insight with significant engagement in the major life issues each age group faces" (p. 54).

6. "Clear mission and clear learning objectives matter. They have power, in part, because the process of determining and evaluating them builds shared purpose and a sense of team" (p. 54).

7. "The faith maturity of teachers matters. The greater the faith maturity of teachers, the greater the growth in faith maturity of participants" (p. 54).

Most factors related to the effectiveness of Christian education "are within the control of the school and the congregation, therefore, with the right support, commitment and energy, effectiveness can be greatly enhanced" (p. 57).

Another major study on faith maturity, namely *Valuegenesis*, was also conducted by Search Institute sponsored by the Project Affirmation of the General Conference of Seventh-day Adventists. The total sample involved 14,748 individuals (12,142 youth, 1,882 parents, 383 teachers, 176 principals, and 155 pastors). In reporting the findings of the study, Dudley (1992) identified some school factors that promote mature faith and denominational loyalty. They were

1. Teachers are competent.
2. Discipline is fair.
3. Teachers are caring and supportive.
4. School spirit is high.
5. Teachers do not put students down.
6. School enforces Adventist standards and way of life.
7. Students have a voice in school policy.
8. Religious education program is high quality.
9. Students talk to teachers about faith (p. 251).

These factors may be classified into three areas: (1) characteristics of teachers; (2) school climate; and (3) religious programming and faith talk (p. 252). "While each of the nine was important, the highest relationship was with the quality of the school religious education program" (p. 252). Thus, this study appears to affirm that "student growth in faith maturity and denominational loyalty seems to be best promoted by offering high quality religious education programming within a supportive and caring school environment" (p. 253).

The *Profile* series of surveys requested by the Seventh-day Adventist North American Division Curriculum Committee provides an ongoing assessment of teachers' perceptions concerning the curriculum, satisfaction with materials, curriculum awareness, and extent of implementation of Seventh-day Adventist curriculum materials. The *Profile* series started in 1987, and is carried out every 2 years. The sample includes one out of six elementary and secondary teachers currently teaching in Adventist schools in North America, and the total population of conference superintendents, conference associates, and North America Division Curriculum Committee members. *Profile '93* was the fourth cycle, in which the following trends were observable:

1. Teachers (and students) view the religious education portion of the curriculum as weak [Sources: Profile '87, '89, '93]
2. Teachers feel professionally isolated—a situation which works against the awareness and use of excellent curriculum practice [Sources: Profile '87, '89, '91, '93, Valuegenesis PRAES survey] (Brantley, 1993, p. 4).

A further analysis of the Profile '93 data regarding teachers' concerns on religious education reported that: (1) more than half of the respondents think that standardized tests do not measure important goals of Seventh-day Adventist education; and (2) secondary teachers are more concerned with how to implement spiritual concepts in the curriculum than are elementary teachers (Korniejczuk, 1993).

Teachers' interest in the integration of faith and learning appeared in a study on Seventh-day Adventist teachers' reading habits and preferences, conducted by Robinson-Rumble (1993). She found that one of the most selected topics on reading preferences was the integration of faith and learning (rated 4.02 on a Likert scale of 0-5).

Philosophical Foundation for the Hypothetical Model of IFL

The hypothetical model developed in chapter 1 was based upon Holmes's model (1975), systematized by Akers (1977). A summary of the main ideas of this philosophical model follows.

Holmes (1975) stated the purpose of a Christian educational institution is that the entire range of life and learning be touched by the Christian faith. The Christian perspective that embraces learning and life is called integration and, according to Holmes, "is an ideal never fully accomplished by anyone but God himself" (p. 45). Integration is not much concerned with criticism and apologetics against other worlds of thought, but has to do with "the positive contributions of human learning to an understanding of the faith and to the development of a Christian worldview, and with the positive contributions of the Christian faith to all the arts and sciences" (p. 46). For Holmes, integration is not only an intellectual activity, but involves every dimension of a person's life and character.

Holmes pointed out that what generally occurs in Christian schools is "interaction," which is a dialogue between science and faith (pp. 45, 46). This dialogue is not a complete integration (p. 6) because there is no coherent view of reality from the perspective of faith.

Another possible way to face the relationship between faith and learning is through "disjunction." According to Holmes, the disjunction position is a defensive one: the points of difference between sciences and religion, philosophy and theology are stressed (pp. 6, 7).

Speaking of the distinctiveness of Christian colleges, Holmes described the other possibility of integration by saying that “the primary impact is still a *conjunction* of Christian witnessing with secular education, rather than the integration of faith and learning into an education that is itself Christian” (p. 7).

Akers (1977) systematized Holmes’s thoughts, as presented above, into four teaching models:

1. Complete disjunction: “The teacher keeps the worlds of faith and learning apart. This results in a dichotomized campus, an unnatural separation of sacred and secular. It gives students a distorted view of reality” (p. 44).

2. Injunction: “The teacher highlights differences between the two approaches to learning by debates, or at best by cordial dialogue. The two worlds are still posited apart, and if there is any correspondence between them, it is only by negotiation, and still across the gulf” (p. 44).

3. Conjunction: The teacher takes “advantage of natural contact points where religion seems in some way to touch the subject or illustrates a moral point. The subject is ‘bent’ to accomplish this contact whenever possible. Deliberate introduction of spiritual corollaries” (p. 44).

4. Integration: “Fusion is accomplished; with one unified reality offered, students get it in one logical totality. No dichotomies are present; the spiritual and natural become expressions of each other” (p. 45).

Teacher Change

Concerning the change in education at the school level, each member of the educational community is involved: the teacher, the principal, the student, the consultant, the support system, the parent, and the community.

Although I recognized that educational change is a complex process involving the whole educational community, the present research focuses on the

teacher as the agent of change through the implementation of the integration of faith and learning.

Two large bodies of research have been developed regarding teacher change. One of them deals with the initial resistance to change. Rogers (1962), after analyzing more than 500 studies of innovation from different disciplines including education, explained why individuals do or do not adopt innovations. This study was fostered by Rogers and Shoemaker (1971). The other body of research was the use of a consultant as an agent of teacher change. Greiner (1969) and Havelock (1969, 1973) studied this phenomenon.

Several factors that motivate teacher change have been studied. Bandura (1977) showed that teachers' belief in their own technical competence influenced teacher efficacy. Ashton and Webb (1986) and Dembo and Gibson (1985) suggested that teachers' ability to influence student-learning outcome is associated with their choice of classroom management and instructional strategies. Another factor that has been studied is the effect of the classroom environment on teacher change (Aitken & Mildon, 1992; Brophy & Good, 1974; Brophy & Evertson, 1981; Centra & Potter, 1980; Doyle, 1986; Hawley & Rosenholtz, 1984). School context is another factor that affects teacher improvement. The role of the principal in setting goals and communicating them to teachers has been studied by Fullan and Promfret (1977) and Walberg and Genova (1982). The principal's roles of supervision and facilitation of teachers' work was presented by Fullan (1982) and Leithwood (1992). Experimentation with new strategies of teaching is yet another facilitator of teacher change discussed by Leithwood and Montgomery (1982) and Little (1982); collegial interaction was presented by Hawley and Rosenholtz (1984), Joyce and Showers (1988), Little (1982), and Showers (1987).

Fullan (1982), in *The Meaning of Educational Change*, discussed the need of change and implementation from the teacher's viewpoint. He defined

implementation as “a process of working out the meaning of change with those directly responsible” (p. 116). Fullan provided several reasons for change:

1. Many new aspects of curricula of the 60s and 70s have not been implemented, and summer training for teachers has not been sufficient for change.
2. There are wide variations in effective time spent in specific subject areas, which affects student learning.
3. Teachers do not have time for reflection of analysis, either individually or collectively about what they are doing.
4. Textbook industries dominate the teachers’ field of choice (at least in the U.S.A. and Canada).
5. Many teachers are frustrated, bored, and alienated.
6. Most teachers do not take the initiative in promoting changes beyond their own classroom.

Fullan also evaluated what makes change work among teachers. He said that interaction among teachers—in other words, communication and support—helps implementation succeed. Educational change from the teacher’s viewpoint is like a change of beliefs that comes through personal development in a context of socialization. That is why the experience of interaction among teachers is so important and rewarding. Fullan also made recommendations to teachers that are induced by the system to implement changes.

Teachers’ reaction to change has much to do with how they view themselves. They tend to be suspicious of change if they feel they are not treated as professionals, or if the change is a result of political motives, or is produced by the enthusiasm of leaders instead of being supported by research (Armstrong, 1989).

Armstrong (1989) added that not all teachers approach their tasks in the same way. Past teaching experiences affect their willingness to change. The

longer the teachers have been teaching in the same way, the harder it is for them to change (Huberman, 1988; Sikes, 1992). The willingness to change also affects the process of change. Attempts to impose change on teachers have been notoriously unsuccessful (Huberman & Miles, 1984; Sikes, 1992). Thus, change agents identify reluctant teachers and help them to see the need for change. Teachers also respect the opinions of teachers who lead out; therefore, once the leaders are convinced of an opinion, other teachers will often begin to find favor with the innovation. Joyce and Showers (1988), in their well-known theory-demonstration-practice-feedback-coaching model, have shown rather conclusively that staff development is central to instructional change involving teaching models.

The decade of the 1960s was the era of innovations. Innovations became the mark of progress. However, around 1970, the term "implementation" came into use. Goodlad and others (1970), Sarason (1971), Gross, Giacuinta, and Bernstein (1971) and Smith and Keith (1971) discussed the fact that innovations were being adopted without anyone asking why.

Innovation

Leithwood (1982) associated the term "innovation" to at least two meanings. The first meaning is something new, recent, novel, unfamiliar, or strange. The second meaning is the most commonly used in education, since "all innovations are more or less incomplete as prescriptions for actual classroom practice" (p. 247). These are somehow incomplete prescriptions because the originator provided only some decisions, and the teacher takes care of the day-to-day decisions that make the innovation work for each situation. According to Leithwood, a curriculum innovation is "a suggested change in existing practices within one or more of a number or curriculum dimensions" (p. 253). These practices came with a new vocabulary and facts (Schmuck & Runkel, 1988), and are connected with vocabulary in studying its effect on the implementation of an innovation (Condon, 1968).

Some Studies on Curriculum Implementation

During the 70s and 80s several models have been developed based on curriculum implementation. These models allow curriculum workers to identify particular areas of difficulty in implementation and to develop strategies to deal with these difficulties.

Gibb (1978) developed the TORI model that focused on personal and social change. It comprised a scale that helps teachers identify how receptive the school environment is toward implementing a particular innovation, and provided some guidelines for facilitating change.

The Innovations Profile Model developed by Leithwood (1982) focused on the teacher. This model helps teachers overcome the potential obstacles for change, and also provides strategies for overcoming implementation obstacles.

A third model developed by Hall and Loucks (1978) is the Concerns-Based Adoption Model (CBAM) which identifies the various levels of teacher concern about an innovation, and how the teacher is using the innovation in the classroom.

CBAM Model

Fuller (1969) identified different concerns based on student teachers' movement through diverse phases of their teaching. She found that an attitude of "non concern" characterized the student teacher during the teacher-preparation program. This attitude shifted to "concern about self" during the early phases of student teaching, and finally, toward the end, students developed "concerns about pupils."

Researchers at the Research and Development Center for Teacher Education located in the University of Texas expanded Fuller's work, and applied her concept to educational innovations in general. Hall and others (Hall, George, & Rutherford, 1977; Hall & Hord, 1984; Hall & Loucks, 1978; Hall, Wallace, & Dossett, 1973; Hord, Rutherford, Huling-Austin, & Hall, 1987) developed the Concerns-Based Adoption

Model (CBAM) which focused on two general areas: (1) stages of concerns (SoC), and (2) levels of use (LoU). The first looked at the issue of teachers' personal concerns in relation to innovations, and the second, levels of use, investigated the way teachers were using an innovation.

The first assumption of the group of researchers from the Research and Development Center for Teacher Education was that **change was a process**, not an event. This assumption was not in vogue during the early 70s, when the general consensus was that once a new curriculum was accepted, immediate change was produced. The second assumption for this group was that the **point of view of the individual is vital** in the change process.

In 1973, Hall and others published the first conceptual framework of what they called the "concerns-based approach." This framework said that to facilitate change, an effective change facilitator needs to understand how the clients perceive change. In education, change facilitators need to understand teachers' perceptions regarding change, and their concerns about change.

The early assumptions presented in 1973 were improved as follows:

1. Understanding the point of view of the participants in the change process is critical.
2. Change is a process, not an event.
3. It is possible to anticipate much that will occur during the change process.
4. Innovations come in all sizes and shapes.
5. Innovations and implementation are two sides of the change.
6. To change something, someone has to change first.
7. Everyone can be a change facilitator (Hall & Hord, 1984, pp. 8-10).

The CBAM model is a client-centered model. One component of the CBAM model is Innovation Configuration (IC). Innovation Configuration is a tool that

"focuses on identifying and describing the various forms of an innovation that different teachers adopt" (Hord and others, 1987, p. 8). The second component of the CBAM model is Stages of Concern (SoC). "These concerns range from early self-concerns to task and ultimately affect concerns about change" (p. 9). A third diagnostic ingredient is Levels of Use. "These Levels of Use portray the way teachers and others work with innovations or new school improvement practices" (p. 9).

Levels of Use

The diagnostic dimension of the CBAM model designed the level of use of implementation. As described by Hall and Hord (1984), Levels of Use focus on behaviors that are taking place in relation to the innovation.

Based upon field work, Hall and Hord (1984) identified eight different levels for assessing the use of an innovation. Those levels were operationally defined and verified. Table 2 describes the levels and operational definitions for each level.

According to the Levels of Use, teachers in levels 0 to 2 are not implementing the innovation. The first use of an innovation is reflected in Level 3, in which the implementation is disjointed. The type of changes or modifications a teacher makes is an important clue to determining Levels of Use. For example, teachers at level 4 are not making any modifications. In the higher levels, modifications are intended to improve the effectiveness and positive outcomes in using the innovation.

Assessing Levels of Use

Hall and Hord (1984) explained that because the assessing of Levels of Use is a behaviorally defined variable, the assessment of Levels of Use is a complex task. They said that the most reliable approach is intensive observation. Of course, this approach is not practical for research purposes. They considered that a questionnaire is not appropriate because "a behavioral variable cannot be assessed

Table 2

Levels of Use of the Innovation

Level	Name	Operational definition
0	NonUse	State in which the user has little or no knowledge of the innovation, no involvement with the innovation, and is doing nothing toward becoming involved.
1	Orientation	State in which the user has recently acquired or is acquiring information about the innovation and/or has recently explored or is exploring its value orientation and its demands upon user and user system.
2	Preparation	State in which the user is preparing for the first use of the innovation.
3	Mechanical Use	State in which the user focuses effort on the short term, day-to-day use of the innovation with little time for reflection. Changes in use are made more to meet user needs than client needs. The user is primarily engaged in a stepwise attempt to master the tasks required to use the innovation, often resulting in disjointed and superficial use.
4a	Routine	Use of the innovation is stabilized. Few if any changes are being made in ongoing use. Little preparation or thought is given to improving innovation use or its consequences.
4b	Refinement	State in which the user varies the use of the innovation to increase the impact on clients within the immediate sphere of influence. Variations are based on knowledge of both short-and long-term consequences for clients.
5	Integration	State in which the user is combining personal efforts to use the innovation with related activities of colleagues to achieve a collective impact on clients within their common sphere of influence.
6	Renewal	State in which the user reevaluates the quality of use of the innovation, seeks major modifications of or alternatives to present innovation to achieve increased impact on clients, examines new developments in the field, and explores new goals for self and the system.

Note. From Gene E. Hall and Shirley M. Hord, 1984, *Change in Schools: Facilitating the Process*, State University of New York Press, p. 84.

with a nonbehavioral measure" (p. 94). They solved this methodological problem with the development of a structured interview with a series of branches, allowing the interviewer to shift to different parts of the interview schedule depending upon the answer of the interviewee.

Teacher Change and School Development

Fullan (1992) expressed the fundamental relationship of implementation, not only with teacher change or development, but also with school development. Viewing teacher development in a short-term perspective, it is possible to say that in-service and professional support on specific innovations are crucial for success. However, viewing teacher development in the long-term process, teachers need "the ability to find meaning among an array of innovative possibilities, and to become adept at knowing when to seek change aggressively, and when to back off" (Fullan, 1992, p. 23).

School climate is essential in the development of an innovation. Certain innovations are more likely to be implemented in certain kinds of school climates. Other factors relating to implementation and teacher change pointed out by Fullan (1992) are the key role of the principal in the implementation of an innovation. "Since the school is the center of change, the head of the school plays a critical role for better or for worse" (p. 24). Along the same lines, local and district authorities are basic in the implementation process because they "provide the combination of pressure and support needed to influence and coordinate teacher development and school development over time" (p. 24).

Hargreaves and Fullan (1992) summarized that it is vital to understand teacher development. This not only involves the knowledge and skills that teachers should acquire, but also understanding what sort of person the teacher is, and the context in which most teachers work. They stressed that without that

understanding teacher change will be temporary, localized in its impact, and unsuccessful in its overall effects.

Research Utilizing CBAM Model

The CBAM model has been tested in education and in a number of other contexts as well (Barucki, 1984; Jordan-Marsh, 1984; Kolb, 1983).

During the late 80s and early 90s, several studies on educational innovations and educational change have been using Hall and Loucks's CBAM model (1978).

Kozora (1993) used the Stages of Concern questionnaire and Levels of Use interviews from the CBAM model to analyze the implementation of cooperative learning. She found that every teacher reached at least the mechanical level of use, and that the most effective training technique used specific examples and participatory demonstrations. Jackson (1993) used the Levels of Concerns, the Innovation Configuration checklist, and Levels of Use to assess a Mathematics program. He found that teachers perceived their roles as facilitators of instruction in analyzing what benefits the implementation of an innovation brings to their students. Bradley (1992) used the CBAM model to better understand program implementation at the local school level to provide further insight into teacher receptivity to change. He found that appropriate materials, assistance from consultants, perception of positive effect on student achievement, peer coaching, and in-service training at the first year of innovation facilitates teacher change at the local school level. Gevirtz (1993) also utilized the CBAM model to assess implementation of a job-search instruction program. He discovered that most of the teachers of his study were in the Routine level, and 38% of them changed the level of use over 4 years. However, the Stages of Concern corresponded to the non-users. Esqueda (1993) studied the relationship between Levels of Use of Mathematics teaching with diverse variables, and found that the majority of teachers were in Mechanical and Routine Levels of Use, and that the level of

implementation was related to gender, degree, self-rated perception, involvement with standards, and attendance at meetings.

Summary

Literature on IFL seems to have changed its focus during the last half of this century. Most of the early works (i.e., Jaarsma, Gaebelein, St. Olaf) were proactive in emphasizing the Christian perspective of education by promoting its inclusion in the curriculum. The later literature exhibits a defensiveness against the threat of secularism and humanism in Christian schools, and were focused on defending the Christian philosophy.

For school administrators, policy makers, and researchers in educational change, the concern regarding teacher change and implementation of innovation which began in the 70s has remained constant.

CHAPTER III

RESEARCH METHODOLOGY

Introduction

This empirical study attempted to develop a hypothetical model that describes teachers' intentional levels of implementation of the integration of faith and learning. An analysis of the integration accomplished by teachers in six South American Seventh-day Adventist secondary schools, and factors related to this implementation, provided elements to corroborate the hypothetical model, and to develop a revised and empirically based IFL implementation model.

This study is descriptive and preliminary in its genre. According to Isaac and Michael (1981), descriptive research is used to portray situations or events. In this type of inquiry the researcher tries to create an accurate picture of one or more variables without any treatment manipulation. That is precisely the intention of this study.

Population

The population for this study consisted of principals, teachers, students, and curriculum consultants in six secondary schools selected from a region of the Seventh-day Adventist Church embracing three countries in South America. This region includes three Spanish-speaking countries that by the end of the 1992 school year had 12 SDA secondary schools, with 2,570 students and 288 teachers (Azevedo, 1993). I decided to conduct this research in South America for two reasons: (1) my greater familiarity with the nuances of my indigenous culture, and

(2) the desire that this study extend beyond North America as a basis for generalizing the model to third-world contexts.

Sample for the Study

In the selection of schools and individuals for this research, I employed the system of purposive sampling (Patton, 1987). Considering the nature of this study, purposive sampling offers some advantages over random sampling. Lincoln and Guba (1985) expressed some of the advantages:

[It] increases the scope or range of data exposed (random or representative sampling is likely to suppress more deviant cases) as well as the likelihood that the full array of multiple realities will be uncovered. Purposive sampling also can be pursued in ways that will maximize the investigator's ability to devise grounded theory that takes adequate account of local conditions, local mutual shaping, and local values. (p. 40)

The purposefully selected schools represent a variety of schools sizes and countries with different cultural, social, and religious backgrounds. Individuals were selected both randomly and purposefully. Teachers were randomly selected within the subjects areas, and students were nominated by principals.

Schools

Of the total of 12 secondary schools in the region, six schools were chosen through purposive sampling based upon the representativeness of the diversity of size, geographic regions, and boarding services, and the expedience of their inclusion in my itinerary. Characteristics of the schools selected are as follows:

School 1

School 1 is a secondary day school that offers elementary and secondary education. It is located in the suburban sector of the capital of the country. The student population belongs mainly to the upper middle class families.

School 2

School 2 is a day school that offers primary and secondary education. It is located in a small city in the interior of the country, and the student population belongs mainly to the middle class.

School 3

School 3 is a major educational institution offering education at all levels—elementary, secondary, college, and graduate—in a mostly rural setting, providing boarding services for secondary and college students. Students come from all over the country and from neighboring countries.

School 4

School 4 is a small boarding school in a rural setting that offers primary and secondary education. It is located in a country possessing no official religion. The general population holds no religious beliefs whatsoever.

School 5

School 5 is a medium-size boarding school offering primary, secondary, and a 2-year college education in a rural zone of the country.

School 6

School 6 is a medium-size day school imparting primary and secondary education in the capital of a professed Christian country.

Teachers

Teachers were selected because they are one of the principal protagonists in the IFL process. The school-community climate is important because it facilitates or obstructs the process of IFL. Holmes (1975) stated that "the teacher is the key to a climate of learning" (p. 82). Gaebelein (1968) explained the important role of a Christian teacher:

This is why the school or college that would develop a Christ-centered and biblical grounded program must fly from its masthead this standard 'No Christian education without Christian teachers' and must never, under any condition pull its colors down. (p. 37)

I was interested in the teachers' perception of their own commitment, knowledge, interest, and implementation of IFL.

The entire population of 138 teachers was included based upon school records. However, for the interviews, I used both random and purposeful sampling in assessing more precise details and specific subjects and situations.

The teaching field is a relevant variable in the discussion of faith and learning. For this reason, teachers were categorized into three groups of disciplines according to the subjects they teach. In case they taught more than one subject, they were categorized according to the predominance of their workloads. The three groups of disciplines were: Humanities, Sciences, and Applied/Fine Arts. Then, two or three teachers were randomly selected by category and by school.

Bible, Language, Literature, History, Philosophy, Psychology, Ethics, and Foreign Language comprised the Humanities category. Health, Biology, Chemistry, Physics, Astronomy, Geography, Mathematics, Economics, Law, Accounting, and Computer Sciences formed the Science category. Drawing, Music, Physical Education, Crafts, and Keyboarding made up the Applied/Fine Arts category.

Criteria for Selection of Teachers

Researchers frequently ask about how many participants are enough. Seidman (1991) answers this question clearly by discussing two criteria: sufficiency and saturation. If there are sufficient numbers to reflect the range of participants and sites that make up the population, it is enough. In response to the criterion of sufficiency, this research included teachers from the three main subject areas: Humanities, Sciences, and Applied/Fine Arts, and randomly selected teachers corresponding to this parameter.

The other criterion is saturation of the information. Saturation of the information begins when the interviewer is no longer learning anything new, and starts to hear the same information. In addition to sufficiency and saturation, which I incorporated, it was decided a certain flexibility would be gained by allowing two or three interviews per subject category. Occasionally two interviews were enough; however, in other schools it was necessary to add a third one. These two criteria are useful and, in a practical sense, the flexibility between two and three interviews per category was particularly worthwhile because sometimes teachers were not available for the interview, or in small schools there often were no more than two teachers per subject category. In addition, some teachers, after answering the questionnaire, were so engaged with the issue that they requested an interview. At other times, during student interviews, the students consistently mentioned a particular teacher as outstanding in implementing IFL. This nomination led me to request an interview with that teacher.

Students

Students were selected because they are the final agents in the IFL process. Holmes (1975) explained the role of the student in the process of IFL:

Students need rather to gain a realistic look at life and to discover for themselves the questions that confront us. They need to work their way painfully through the maze of alternative ideas and arguments while finding out how the Christian faith speaks to such matters. (p. 46)

Students under a teacher's guidance find their own integration; therefore, their perceptions on how teachers are guiding integration are relevant.

Students were nominated by the principal of each school. I asked the principal to select six students representing religious, grade, and gender diversity. Therefore each principal selected three males and three females; one from each grade level (grades 8 to 12). Three of these were Seventh-day Adventist students,

and three were non-Seventh-day Adventist students; all of them had high academic achievement.

Principals and Curriculum Consultants

Principals and curriculum supervisors were selected because they set the tone for the educational enterprise at the school and also provide the incentive and motivation for IFL. Much of the literature on school change suggests that although many factors affected implementation, the leadership of the principal appeared to be one of the most important factors (Hall & Hord, 1984; Thomas, 1978). Curriculum consultants are facilitators and see themselves as colleagues of the faculty. Their principal role is to support and assist teachers in their work. In accomplishing this task, they involve teachers in the decision-making process (Hall & Hord, 1984).

The total population of principals and curriculum consultants were selected to be interviewed. The purpose of the interview was to identify principals' vision of IFL for their schools as well as their perceptions of how teachers are deliberately implementing IFL in their institutions. Curriculum consultants were interviewed in order to better discern their role in the IFL process.

Documents and Field Notes

Finally, all available documents such as teacher course plans, institutional objectives, brochures, and other promotional materials and school statistics were gathered. Documents also served to corroborate teachers' responses to questionnaires and interviews. Field notes were also taken during the visit to each school.

Research Methods

In studying the process teachers experience in implementing the integration of faith and learning in their classes, the most appropriate approach is a multi-method approach. Hittleman and Simon (1992) explained that in descriptive

research the question "What exists?" can be answered using quantitative or qualitative methods. For this investigation, both quantitative and qualitative methods were used.

Educational researchers frequently base their investigation upon one method. According to Webb, Campbell, Schwartz, and Sechrest (1973), "the principal objection is that they are used alone" (p. 1). Each method has its bias. By using a collection of combined methods, it is possible to avoid sharing the same weaknesses. "The most persuasive evidence comes through a triangulation of measurement processes" (p. 3). Of course, different methods of the multi-method approach are not to be weighed equally, but "weighed according to the amount of extraneous variation each is known to have and, taken in combination, according to their independence from similar sources of bias" (p. 3).

Quantitative methods allow the researcher to collect, process, and describe information involving the assignment of numerical values to variables. Statistical procedures facilitate one's understanding of an extensive amount of numerical data. I used a questionnaire to survey teachers' interests, their implementation of IFL in their classroom, and also to collect demographic information of the entire sample.

In exploring the process of implementing the integration of faith and learning, interpretation is required. In studying the process of change as teachers experience implementing IFL in their classes, qualitative methods are the most suitable. Bogdan and Biklen (1982) stated that qualitative researchers are not concerned with products, but with processes and the meanings which people attach to their lives. The interest of this study was the process of implementation of IFL as seen by teachers, students, principals, and curriculum consultants. Another reason for using qualitative methods is that they coincide with the process of implementation. According to Carson (1983), implementation is an interpretative act, particularly for teachers. "The interpretative act is the effort by the teacher to

fuse the horizon of the curriculum plan as text, with the horizon of teaching as a lived experience" (p. 20). Teachers are the main protagonists of this research because they are the ones in charge of the IFL at the class level. Thus, a qualitative research method humanizes teachers and permits their subjectivity to be highlighted. In short, qualitative research allows for a description of the world as they view it.

Two qualitative research techniques were employed in this study: interviews and document analysis.

Research Procedures

To achieve this study, the following research procedures were accomplished: (1) development of the theoretical framework, (2) development of the questionnaire, (3) mailing of the questionnaire, (4) the return of the questionnaire, (5) development of the interview schedule, (6) interviews collection, (7) document collection, (8) coding and analysis of the questionnaire, (9) transcription, coding, and analysis of the interviews, (10) analysis of document, (11) cross-validation, and (12) revision of the theoretical framework. Figure 1 illustrates the research design.

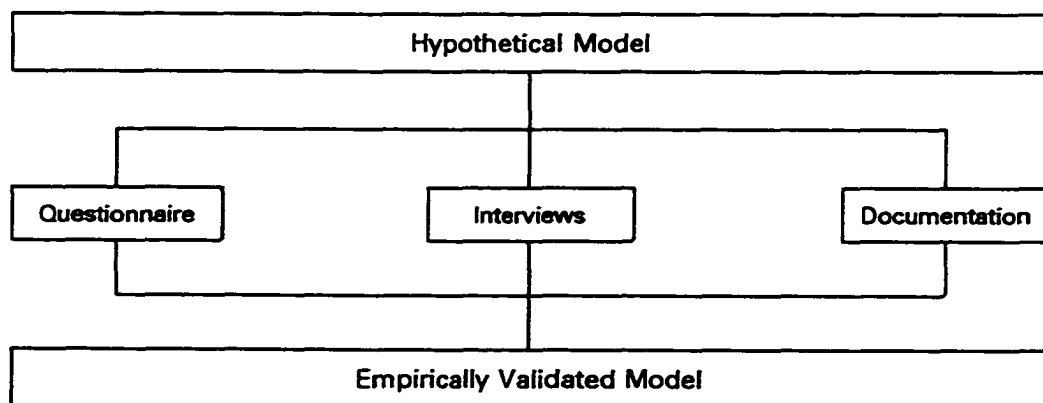


Figure 1. Research design outline.

Development of the Theoretical Framework

The framework was developed in several steps as follows:

1. The search for a philosophical model of integration of faith and learning, and a research-based model of teacher implementation from the education field (The philosophical model chosen was Holmes's way of teaching as presented in *The Idea of a Christian College* [1975]. The selected educational model was one of the components of the CBAM model, named Levels of Use, proposed by Hall & Loucks [1978].)
2. The development of a hypothetical model based on the combination of the two models mentioned above (The preliminary framework took the stages from the Levels of Use, and adapted the characteristics of each level to the philosophical model. Holmes's model is not presented as a process, but as possible ways of teaching.)
3. The submission of the preliminary model to experts in the field of education and integration of faith and learning (Interviews with members of the dissertation committee, and other experts, including Arthur Holmes, provided suggestions for improving this preliminary model.)
4. The presentation of the framework in the 11th Seminar of Integration of Faith and Learning, June 1993, to an international panel of Christian college teachers, and was published in *Christ in the Classroom* (Korniejczuk, 1994), *The Journal of Adventist Education* (Korniejczuk & Brantley, 1993), and the *Journal of Research on Christian Education* (Korniejczuk & Kijai, 1994).

Development of the Questionnaire

The instrument used in this study was a questionnaire developed by the researcher. The purpose of the questionnaire was to measure the teachers' perceptions of knowledge, interest, management concerns, and the degree of

deliberate implementation of IFL in their classes. It also included demographic questions that could be related to the IFL process.

The questionnaire was originally based upon the Stages of Concern Questionnaire, one of the instruments measuring Stages of Concern—a dimension of the CBAM model (Hall, 1979).

Stages of Concern concentrates on individuals involved in change. Teachers who are implementing an innovation have different kinds of concerns, and those concerns develop in a different way. One of the procedures to assess concerns is the Stages of Concern Questionnaire developed by Hall, George, and Rutherford (1979). Although the Stages of Concern Questionnaire has been developed through extensive research, and appears to be valid and reliable (Hord and others, 1987), it did not completely fit the needs of this research. That questionnaire was designed to assess any innovation program during the process of implementation, and therefore is quite general. IFL is not an innovation program, and concerns related to its implementation are specific and particular. I was interested in assessing not only concerns but levels of implementation. Since no instrument had been developed to measure knowledge, interest, concerns, and level of implementation of IFL, I developed a questionnaire ad hoc.

Mailing the Questionnaire

Copies of the Spanish version of the instrument and the transmittal letter were mailed to the principal of each school, along with instructions to distribute them to each secondary-school teacher. Principals distributed the questionnaires to teachers, who could fill in the instrument in their free time.

Questionnaires were mailed to principals of each selected school about a month before my arrival for the interviews. However, in some schools, the questionnaire arrived shortly before I did and was completed during my stay at the school.

Return of the Questionnaire

Teachers returned the completed instrument to the principal's office. The principals gathered the questionnaires and I collected them when I visited the schools in order to do the interviews.

A predetermined response level of 70% was judged to be adequate. However, the response rate reached 75.79% of the teacher population.

Development of the Interview Schedule

Interview schedules were based upon the questionnaire and the hypothetical model developed by the researcher. The interview schedule was only a guide for the interviewer, not a fixed questionnaire to be followed. See Appendix A for the interview schedule.

Collection of Interviews

Once I arrived at each school, I endeavored to interview the principal first, so that he/she would know the purpose and tenor of the whole research project. However, in most of the schools an informal interview with the principal took place first, and a more formal, taped interview was postponed until the end of the research visit, due to scheduling arrangements. Teachers' and students' interviews were arranged according to their availability in the general school schedule.

I made the necessary arrangements for each school visit by mail and/or telephone. Each visit lasted between 3 to 4 working days. An outline of the data collection schedule for the interviews is given in Table 3.

Each interview lasted from 20 minutes to 2 hours. Student interviews were from 20 to 40 minutes. Teacher and principal interviews lasted between 45 minutes and 2 hours. I took time to create an atmosphere of trust with the interviewee prior to starting the interview itself. Table 3 provides the schedules of interview data collection, and Table 4 provides general information on the data gathered by interviews.

Besides the planned interviews described above, I found it important to do a few more extra interviews with two college teachers who have conducted in-service meetings and workshops on IFL to teachers in the selected schools, and to the department head of education of the Seventh-day Adventist church district.

Document Collection and Field Notes

I read all course plans available at the time of my visit to the school as well as general objectives of the institution, mission purpose, brochures, or any other document provided by the principal, curriculum consultant, or teachers that portrayed the purpose of the school regarding the integration of faith and learning. Document analyses were conducted in between interviews. Field notes were taken immediately after interviews, expanded at the end of the day, and completed during the transcription of the interviews.

Table 3

Schedule of Interview Data Collection

School	Date
1	November 2 -5, 1993
2	November 8, 10, 12, and 19, 1993
3	November 9, 11, 14, and 18, 1993
4	November 15-17, 1993
5	November 22-24, 1993
6	November 26-30, 1993

Table 4
Number of Interviews by School

School	Interviews					
	Teachers			Students	Principals	Curriculum Consultants
	Humanities	Sciences	Arts			
1	3	3	2	6	1	1
2	3	3	2	6	1	1
3	4	3	2	6	2	1
4	3	3	2	6	2	--
5	3	3	3	6	2	--
6	3	3	1	5	1	--

Coding and Analysis of the Questionnaire

Questionnaires were coded by school and by individual, and were analyzed using the SPSS statistical package for descriptive statistics. A content analysis was completed to assign each teacher a level of implementation. Raw data is presented in Appendix B.

Interview Transcription, Coding, and Analysis

I transcribed the tape-recorded interviews and coded them by school and by individual—whether teacher, student, principal, or curriculum consultant. Interviews were analyzed by their content in looking for patterns relating to levels of implementation and factors relating to this implementation.

Analysis of Documents

I looked for evidences of faith-learning integration in every document available. Documents provided elements for cross-validation and context analysis.

Cross-Validation

I looked for teachers with complete data, that is, the questionnaire, interview, student interview, and documentation. Cross-validation analyses were conducted.

Revision of the Framework

After analyzing all the data gathered for this research, a revision of the theoretical framework emerged.

Summary of Research Procedures

Table 5 summarizes the sources of data, research techniques, and selection procedures.

Table 5

Data Collection Procedures

Data Source	Research Technique	Selection Procedure
Teachers	Questionnaire	All secondary school teachers from the six selected schools
Teachers	Interview	In each school two or three teachers from each of the three subjects areas: Humanities, Sciences, and Fine/Applied Arts
Principals	Interview	Total population of each school
Students	Interview	Six representative students from each selected school
Documents: School statement School records Teacher course plans	Document analysis	Total available documentation

The Data File

The data file was formed by compiling all pertinent information concerning each individual and school. Answers to questionnaires were organized in a computer file for statistical analysis. Transcriptions of taped interviews, summaries from informal conversations, notes from observations and the researcher's reflections were organized and coded in order to be correlated in a relatively easily manner. Also included in the data file are the documents provided by schools.

Organized in four volumes, the first volume contains the data collected from the questionnaires, and the second volume contains the interviews. The third volume holds field notes, and the fourth comprises all the documents. Questionnaires were matched with the teacher interviews, and the student interviews were matched with each teacher according to teacher workload. This matching was coded in the original to facilitate cross-validation between the different sources of information. For example, the comparison of findings of a teacher interview and student interview validates the responses of the teacher questionnaire. In the same way, cross-comparisons were made with teacher course plans, interviews, and questionnaires.

Instrumentation

Two basic instruments were developed for this research: (1) the survey questionnaire, and (2) the interview schedules for teachers, students, principals, and curriculum consultants.

Questionnaire

Development of the Questionnaire

The questionnaire was developed in four phases.

Phase 1

I developed the first draft in both Spanish and English. The English version was discussed with members of the dissertation committee and was revised several times. These revisions were made in both languages.

Phase 2

I discussed the Spanish revised version of the questionnaire with an expert in both IFL and the Spanish language. After some minor revisions, the instrument was ready for a pilot test.

Phase 3

I conducted a pilot test on a group of 13 former high-school teachers from South America who presently reside in Berrien Springs, Michigan. Many of these teachers had taught in several of the schools included in this research. After the teachers completed the questionnaire, I interviewed each respondent in order to discuss accuracy, interpretation, and format of the instrument. The responses to the pilot study were examined to note frequency, and to determine which categories of answers would necessitate any modification of categories. This pilot test provided several advantages in that (1) it examined whether the instrument was measuring what it was intended to measure—general teacher perceptions on knowledge, interest, management concerns, and degree of implementation; and (2) it examined whether the instrument wording was clear and the format was friendly.

Phase 4

After making minor changes as indicated by the pilot study, the questionnaire was submitted to my dissertation committee along with two experts, one of whom has developed a questionnaire in Spanish for a similar research study.

The English and Spanish versions of the questionnaire, along with the transmittal letter, are in Appendix A.

Content Description of the Questionnaire

The questionnaire has two parts: the first part deals with the knowledge, interest, management concerns, and degree of implementation of IFL; the second part deals with the demographic information of the respondent.

Part 1

The first part of the questionnaire is subdivided into two sections.

The first section includes statements relating to knowledge, interest, management concerns, and difficulty of the subject.

Statements 1, 3, and 13 are related to teachers' perception of knowledge regarding IFL. Statements 1 and 3 have reverse scores. Statements 6, 7, 10, 16, 18, and 19 are related to teacher interest concerning IFL. Statement 7 has a reverse score, and statements 16 and 19 are more related to teachers who are not currently implementing IFL in their classes.

Statements 2, 4, 5, 8, 11, 12, 15, and 17 point out different management concerns teachers may have. Some of them relate more to teachers who are implementing IFL such as statements 4 (superiors' opinions on my IFL), 5 (tension between interest on IFL and teaching responsibilities), and 11 (my ability to implement IFL). Others statements relate more to those who are not implementing IFL yet, such as statements 8 (who is going to make decisions on IFL), 12 (how my teaching will change if I implement IFL), 15 (I'm overwhelmed with other things) and 17 (I would like to know how much time and energy IFL requires).

Statements 9 and 14 are related to teachers' preparation in implementing IFL. Statement 20 addresses the difficulty of the subject in integrating biblical principles and values (reverse score).

The second section includes statements relating to the level of implementation of IFL. Statements 21, 24, 27, and 31 describe the changes of

techniques for IFL. Statements 22, 26, 28, and 29 reveal students' involvement in IFL, and statements 23, 25, and 30 describe collegiate collaboration in IFL.

Part 2

The second part includes demographic questions relating to teachers. These are: (1) age group, (2) years of teaching experience, (3) subjects taught, (4) workload, (5) religious affiliation, (6) number of years (if SDA), (7) number of years of SDA education, (8) raised in SDA home, (9) maximum degree obtained, (10) institution where the degree was obtained, (11) theological or religious studies, and (12) source of knowledge of IFL.

Table 6 summarizes the categorization of the questionnaire statements by content.

Validity and Reliability of the Questionnaire

I based the creation of the instrument on the theoretical framework presented in chapter 1. The framework is based upon two models: the CBAM model and the philosophical model of IFL. Although the questionnaire does not intend to measure each level of the theoretical framework in a meticulous way, its intention is to assess general teacher perceptions regarding knowledge, interest, management concerns, and degrees of implementation.

Regarding content validity, the instrument was submitted to several IFL authorities during the stages of its development who agreed on its content validity.

Triangulation

The technique of triangulation improves the probability that findings and interpretations will be found credible (Lincoln & Guba, 1985). Two types of triangulation were utilized in this research: triangulation of sources and triangulation of methods.

Table 6

Categorization of Questionnaire Statements

General statements				
Perception of knowledge	Interest/ implementing	Management concerns	Preparation to implement	Difficulties/ subject
1	6	2	9	20
3	7	4	14	
13	10	5		
	16	8		
	18	11		
	19	12		
		15		
		17		
General statements				
Change of techniques	Student involvement		Collegiate collaboration	
21	22		23	
24	26		25	
27	28		30	
31	29			

Triangulation of sources. According to Lincoln and Guba (1985), this type of triangulation is the most commonly used among researchers. It involves using different sources for the same information. Thus, the students' interviews and document analyses were used to corroborate teacher information given in the interviews. For example, for each teacher, I looked at what the students attending his/her classes perceived the teacher was doing regarding IFL, to what extent the course plan included IFL, as well as my perceptions as recorded in the field notes.

Triangulation of methods. The use of different methods for triangulation in this inquiry imply different data-collection modes. Questionnaires and interviews were used to verify the same information.

Results of the triangulation of methods and sources are presented in the cross-validation chart, Appendix C. I used the pilot test and the panel of experts to test the internal consistency of the questionnaire.

Interviews

One of the more common forms of qualitative research is the interview. "Interviews differ from questionnaires in that the researchers can modify the data collection situation to fit the respondent's replies" (Hittleman & Simon, 1992, p. 26). The researcher can rephrase a question or solicit additional information. In-depth interviews allow the interviewer to listen on at least three levels:

1. What the interviewee is saying, the substance of the message, that is, the "outer voice," what the participant could be saying to an audience
2. The "inner voice," that is, paying attention to the language the interviewee is using, and relating the language to the participant's feelings
3. The process of the interview, the body language, and the interviewer's movement (Seidman, 1991, pp. 56, 57).

In-depth non-structured interviews were conducted with teachers, principals, curriculum supervisors, and students in order to understand more fully the

implementation of IFL. According to Seidman (1991), the purpose of in-depth interviews is to understand “the experience of other people and the meaning they make of that experience” (p. 3).

Interview Schedules

Teacher interviews

Interview schedules for teachers included open-ended questions relating to their knowledge, interest, concerns, and different aspects of the deliberate integration of faith and learning.

Teachers were questioned on what they understand by IFL. They explained their ideas on curricular versus extracurricular integration. Interviewees were encouraged to explain the relationship they found between the mission of their schools and the integration of faith and learning they are accomplishing. Another aspect of the interview dealt with teachers’ perceptions of the biblical principles and values that undergird the subject/s they teach, and with the methods they use to integrate faith in their subject/s. I also questioned to what extent they have been able to accomplish this ideal, asking for concrete details such as planning, preparation, materials, students’ and parents’ responses, government restrictions, difficulties of the subject, and perceived support from the institution and the educational system. Teachers were also encouraged to share their successful experiences and frustrations, and finally to provide suggestions on how their needs can be met in order to improve their implementation.

Student interviews

Interview schedules for students had open-ended questions regarding their perceptions of the integration of faith and learning in their schools—what their teachers are doing, what is appropriate, and how students participate in the integration.

Students were asked to explain in what subjects they observe their teachers integrating faith. I asked the students to describe in detail what teachers do, and how students participate in integration. They also discussed what they consider to be appropriate and exemplary ways of implementing IFL.

Principals' and curriculum consultants' interviews

Interview schedules for principals and curriculum consultants assessed their perceptions of the integration of faith and learning in their schools—what are their visions as leaders, what they perceive is actually happening, and their activities relating to the mission of the school.

The interview schedules can be found in Appendix A. Interviews were conducted, tape recorded, and transcribed by the researcher. A second listening during the transcribing process allowed me to complete field notes written immediately after each interview.

Validity of the Interviews

The concept of validity in qualitative research is presently under discussion. On the one hand, Mishler (1979) argues for a new vocabulary to discuss validity and reliability, whereas Lincoln and Guba (1985), on the other hand, utilize the notion of "trustworthiness" instead of validity. Ferraroti (1981) questions both the terms "validity" and "trustworthiness" and maintains that a deep intersubjectivity between the researcher and what is researched is the best way to gain knowledge.

To minimize the effect of the interviewer and the interviewing situation is the goal of each researcher. In fact, qualitative researchers recognize that although the human interviewer may diminish the validity of the interview by asking questions, sharing experiences, or moreover, by selecting the material, interpreting, describing and analyzing it, it is also true that the human interviewer can be a "marvelously

smart, adaptable, flexible instrument who can respond to situations with skill, tact, and understanding” (Seidman, 1991, p. 16).

I recognized the interaction effect of my role as interviewer, and carefully documented all the sources, including my own impressions.

Data Analyses

Data was analyzed from a variety of perspectives. The purpose of this variety was to answer the research questions from different viewpoints, to provide validation to the study, and to take into consideration the complexity of the integration of faith and learning process, thereby avoiding simplistic quantification.

Questionnaire

In analyzing the data from the questionnaire, a combination of techniques was used. The quantitative method requires a numerical approach. Thus, after I collected the data, descriptive statistics were used to analyze it. A preliminary analysis of the data, based upon the questionnaire, provided demographical information of the teacher population included in this research, and a general overview of teachers’ perceptions regarding their implementation of IFL. The SPSS statistical package processed the numerical data. Content analysis of the questionnaire revealed the levels of implementation of each teacher. Appendix E contains teachers responses to the questionnaire, and Appendix F presents Chi-square tests for relationship between selected demographic variables and teacher knowledge of IFL and teacher interest in IFL.

Criteria for Analysis of the Questionnaire

Two analyses were conducted with this questionnaire: descriptive statistics by using SPSS and content analysis based on the categorization of questionnaire items as presented in Table 6. Teachers could mark their knowledge, interest, concerns, and implementation on a scale of 1, the lowest, to 7, the highest. They could also mark N if the statement did not apply to their current situation. Some statements

of the first part of the questionnaire (1, 3, 5, 7 and 20) received a high number of "does not apply" responses, indicating some confusion in those items. During the course of the interviews, it became evident that none of the teachers felt that the IFL issues "did not apply" to them. Therefore, any significant measure of the N category represented a source of questionnaire response error. Thus, responses marked as "does not apply" were not indicated in the primary analysis. The responses marked as 1 or 2 were considered "not true"; responses marked as 3, 4, or 5 were considered "somewhat true"; and responses marked as 6 or 7 were considered as "very true."

***Criteria for scoring teachers' perceptions
by category of statements***

The criteria for determining teachers' perceptions regarding different categories is the following:

1. A score below an average of 1.5 was determined as No.
2. A score between an average of 1.5 and 3.5 was determined as Low.
3. A score between an average of 3.5 and 5.5 was determined as Medium or Moderate.
4. A score above an average of 5.5 was determined as High.

Criteria for scoring level of implementation

The criteria for scoring the levels of implementation are presented in Table 7.

Interviews

In qualitative research, researchers usually reduce the information to smaller segments from which they can induce patterns and trends. In analyzing teachers' interviews, I observed teachers' motivation to integrate faith, their knowledge on implementation, what they are currently accomplishing, and intrinsic factors relating to their level of implementation. In analyzing students' interviews, I looked for students' interpretation of teacher implementation of integration and perceived

Table 7

Criteria for Assigning Implementation Levels

Level	Criteria			
	Deliberate implementation	Knowledge	Interest	Preparation
0	Predominance of "no" answers	Any	Low	Any
	Predominance of "low" answers	Low	Low	Low
1	Predominance of "no" answers	Low Moderate High Low	Moderate or high Moderate or high Moderate or high Moderate or high	No or low No or low No or low Moderate or high
2	Predominance of "no" answers	Moderate or high	Moderate or high	High
3	Predominance of "low" answers	Moderate or high Moderate or high	Moderate High	Moderate or high Moderate or high
	Predominance of "moderate" answers	Moderate Moderate or high	Moderate Moderate or high	Moderate Low
4	Predominance of "moderate" answers	High Moderate High	Moderate High High	Moderate or high Moderate or high Moderate
5	"High" at least in Student involv. and no less than "moderate" in change	High High Moderate	High Moderate High	Moderate High High
6	"High" at least in two areas including Collegial Collab.	High	High	High

factors relating to implementation. Principals' and curriculum consultants' interviews provided elements to complete the context in which the integration of faith and learning takes place, and the perceived vision of the leaders of the school.

Analysis of Documents

Each school provided me with institutional objectives, mission statements, and intended profile of the students as available. I also read all accessible course plans, and took notes of all objectives, content outlines, activities, or evaluation statements where biblical principles or Christian values were subject-related. I photocopied all the available institutional objectives and mission statements, as well as any other material provided by principals or curriculum consultants that might be related to IFL. Regarding course plans, I took notes of any IFL element present in general objectives, specific objectives, activities, and evaluations per subject, grade, and teacher.

Cross-Validation

One procedure used by qualitative researchers to support their interpretations is triangulation, "a procedure for cross-validating information" (Hittleman & Simon, 1992, p. 196).

Cross-validation analysis provides triangulation of sources and methods. I looked for complete teacher data from all the sources available: questionnaires, teacher interviews, student interviews, and course plans. Out of the 49 teachers interviewed, complete data were found for 35 teachers. Thus, if a particular teacher was (1) interviewed, (2) his/her questionnaire returned, (3) I had interviewed at least one of his/her students, and (4) at least one of his/her course plans was made available to me, that teacher was then included in the cross-validation table. An analysis of the different sources provided me with elements to assign a determinate level of implementation to those teachers. A cross-validation matrix can be found in Appendix C. Table 8 describes the assignment of levels from the questionnaire,

whereas Table 9 provides the assignment of levels of implementation provided by the questionnaire and by interviews and documents combined.

The correlation between the assignment of levels using the teacher questionnaire and the interview/document review was .84 ($p < .0001$), suggesting a good agreement between the two methods of level assignment. Table 10 shows the distribution of levels based on the teachers' responses to the questionnaire and the interview/document review. Figure 2 pictures the distribution of levels.

In spite of the good agreement between the questionnaire and the interview/document review, I decided to use the assigned levels based upon the analysis of interviews and documents as definite levels for two reasons:

1. The questionnaire provided only one source of information, whereas interviews and documents provided at least three sources of information for triangulation.
2. The interviews provided more in-depth information on levels of implementation because they allowed follow-up questions and clarifications. In addition, since this is regarded as a preliminary study on the process of IFL teacher implementation, it was more pertinent to rely on a multiplicity of sources.

Descriptive Analysis

Questionnaires, interviews, documents, and field notes were analyzed to assess the level of implementation of teachers. The narrative of this analysis represented teachers' different levels of implementation, including how they perceived IFL, what they were doing, and their rationale.

Context

Integration of faith and learning takes place in school. Although teachers were the focus of this research, the whole educational community is involved in the process. Therefore it is impossible to ignore the context. A school-by-school summary analysis provides insight into the school atmosphere where IFL is being

Table 8

Distribution of Teachers by Levels Based Upon the Questionnaire

Teacher ID	Knowledge	Interest	Prep.	Implementation			Level
				Change	Student Involvement	Collegial Collaboration	
1	High	High	High	Low	Moderate	Moderate	4
2	Moderate	High	No	No	No	No	1
3	Low	Low	Low	Low	Moderate	Low	0
4	Moderate	Moderate	No	Moderate	Moderate	--*	3
5	Low	High	No	--	--	--	1
6	Low	Moderate	Mod	--	--	--	1
7	Low	Moderate	Low	--	--	--	1
8	Moderate	High	High	No	Low	--	2
9	High	High	High	--	--	--	2
10	High	High	High	High	High	No	5
11	High	High	High	Moderate	Low	No	4
12	High	High	High	High	High	Low	5
13	High	High	High	Moderate	High	Moderate	5
14	High	High	High	High	High	Moderate	5
15	Low	High	High	--	--	--	1
16	High	High	High	Moderate	Moderate	No	4
17	Moderate	High	Low	--	--	--	1
18	Moderate	High	Mod	Moderate	Moderate	No	4
19	Moderate	High	No	--	--	--	1
20	High	High	High	Moderate	Low	No	4
21	Moderate	High	High	Moderate	Low	No	4
22	High	Moderate	High	Low	Low	No	3
23	Moderate	High	Mod	Low	Low	No	3
24	High	High	Mod	High	High	Low	5
25	High	High	Mod	Moderate	Low	Low	4
26	Moderate	Moderate	Low	--	--	--	1
27	High	High	High	Low	Low	No	3
28	High	High	Low	Moderate	Moderate	No	3
29	Moderate	Moderate	Mod	Moderate	Moderate	No	3
30	High	High	High	Moderate	Moderate	Low	4
31	Low	High	High	Low	Low	No	1
32	High	Moderate	Mod	Moderate	Moderate	No	4
33	High	High	High	Moderate	Moderate	Low	4
34	Moderate	Moderate	No	--	--	--	1
35	Low	High	Low	--	--	--	1

*--= n.a.

Table 9

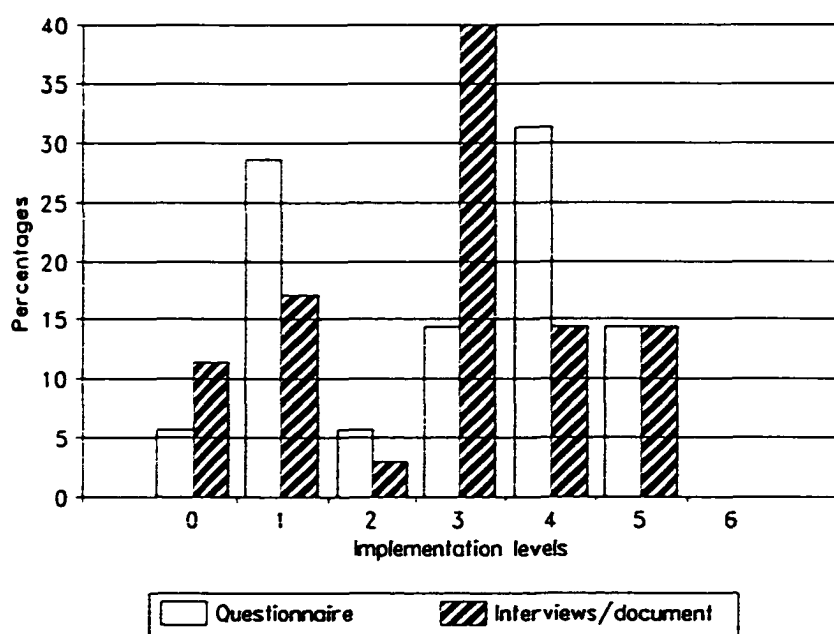
Assignment of Levels from the Questionnaire and Other Combined Sources

Teacher ID	Questionnaire level	Other sources
1	4	4
2	1	3
3	0	0
4	3	3
5	1	1
6	1	3
7	1	1
8	2	1
9	2	3
10	5	3
11	4	5
12	5	5
13	5	5
14	5	5
15	1	1
16	4	3
17	1	1
18	4	4
19	1	1
20	4	3
21	4	3
22	3	3
23	3	3
24	5	5
25	4	4
26	1	1
27	3	2
28	3	3
29	3	3
30	4	3
31	1	0
32	4	4
33	4	4
34	1	0
35	1	3

Table 10

Distribution of Implementation Levels (N=35)

Level	Questionnaire %	Interviews/Documents
0	5.7	11.4
1	28.6	17.1
2	5.7	2.9
3	14.3	40.0
4	31.4	14.3
5	14.3	14.3
6	--	--

**Figure 2.** Distribution of teachers by levels of implementation.

developed and how administrators' and teachers' concerns varied according to the characteristics of each school.

Development of an Empirically Validated Model

The hypothetical framework presented in chapter 1 was revised after the cross-validation analysis, and an empirically validated framework was made containing operational characteristics of the levels of implementation.

Summary

To answer the research questions stated in chapter 1, I developed an hypothetical framework as presented in chapter 1. This hypothetical model was empirically validated using qualitative and quantitative methods. A questionnaire was developed and applied to the totality of teachers of the selected schools, and interviews were conducted to selected teachers, students, principals and curriculum consultants of the schools. A cross-validation analysis was conducted to validate both the questionnaire and the results. The hypothetical model was revised, and the empirically validated IFL implementation model was developed.

CHAPTER IV

DATA FINDINGS AND ANALYSIS

One of the purposes of this study was to develop a hypothetical model of teacher implementation of the integration of faith and learning, which was presented in chapter 1. In chapter 3, the advantages of using different sources of data and different methodologies for this research study were discussed, and a cross-validation analysis of data was presented. This chapter focuses on the findings and analysis of data from different perspectives in order to (1) describe the extent to which observations of teacher faith-learning integration conform to the hypothetical model, (2) compare the agreement of teachers', students', and administrators' perceptions, along with the documentation relative to teacher integration, and (3) explore the factors which appear to influence teacher integration. Finally, after the presentation of findings and analysis of data, I offer a revised and empirically validated model of the process of deliberate teacher integration of faith and learning.

The content of this chapter is organized into four sections: (1) teachers' demographic information based on the questionnaire, (2) the appraisals of deliberate teacher implementation of integration of faith and learning from different sources, (3) the presentation and analysis of factors related to teacher implementation of IFL, and (4) the development of an empirically based stage model of IFL implementation.

Demographic Information

Results from the second part of the questionnaire provide demographic information about teachers' age group, teaching experience, subjects taught, workload, religious affiliation and background, degree, and religious education background.

Returns

Questionnaires were mailed to school principals to be distributed to the total high-school teacher population. According to school records, 138 teachers from six selected schools comprised the total teacher population.

Of the 138 questionnaires distributed, 104 were returned (75.79%). Table 11 shows a comparison of the number of respondents with the total number of teachers in each school.

Table 11

Distribution of Sent and Returned Questionnaires (N=138)

School	Sent	Returned	Percentage
1	28	22	78.6
2	25	18	72.0
3	27	20	74.1
4	19	13	68.4
5	24	18	75.0
6	15	13	86.7
TOTAL	138	104	75.8

Demographic Data

Age of Responding Teachers

The largest number of responding teachers reported being between 30 and 39 years old (41.3%). Another 26% were younger (between 20 and 29 years old), whereas 22.1% reported being between 40 and 49 years old. Only 8.7% of the responding teachers were in their 50s, and 1.9% were more than 60 years old (see Figure 3).

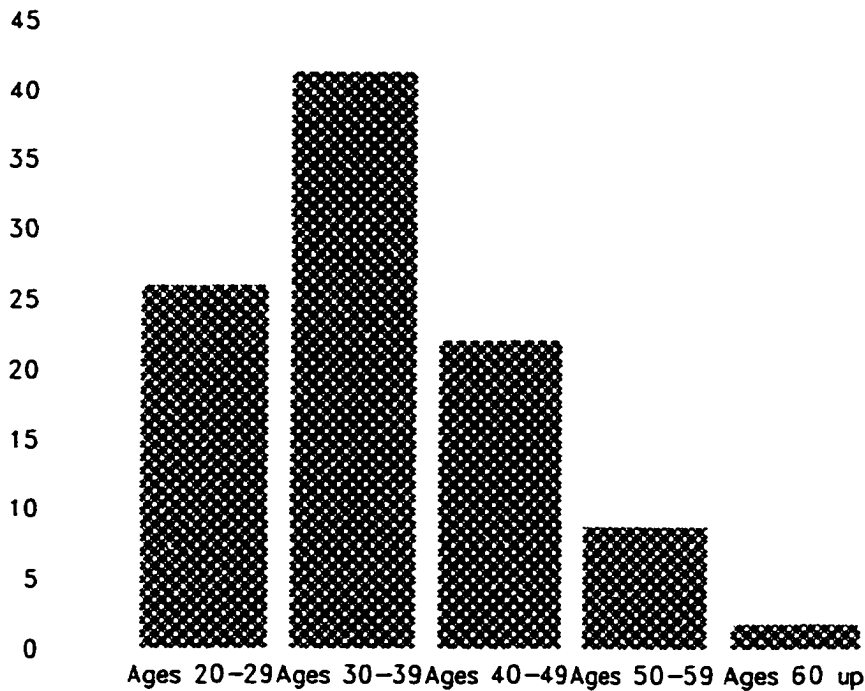


Figure 3. Distribution of teachers by age groups.

Teaching Experience

The largest percentage (38.6%) of teachers reported having been in the teaching profession from 1 to 5 years. Another 25.7% stated they had been serving for 6 to 10 years. Almost 14% of teachers reported having taught between 11 and 15 years. Only 8.9% of the respondents had taught between 16 and 20 years, and 12.9% taught more than 20 years (see Figure 4).

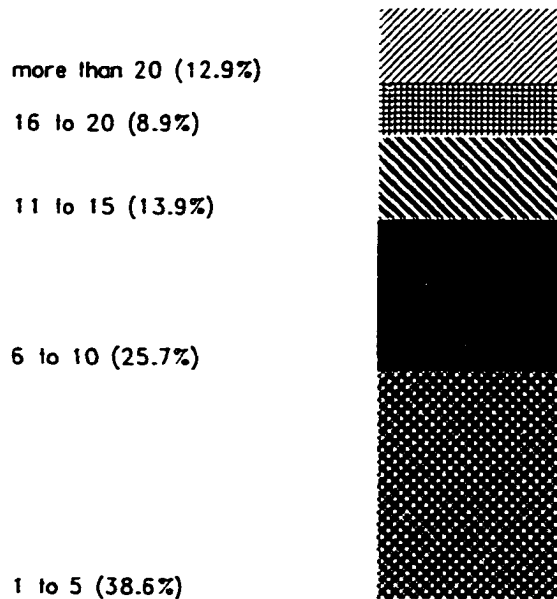


Figure 4. Distribution of teachers by years of teaching experience.

Subjects Taught

The respondents were classified into three groups by subject areas: Humanities, Sciences, and Applied/Fine Arts. The total percentage adds to more than 100% because some teachers taught more than one subject. Many teachers taught Bible and another subject. The return rate by subject represented the actual constellation of teachers in each school quite well. Table 12 presents the distribution of teachers by subject.

Table 12

Subjects Areas Taught (N= 104)

Area	Subject	N	Percentage
Humanities	Bible	25	24.0
	Language, Literature and foreign languages	21	20.2
	History	6	5.8
	Philosophy/Psychology	10	9.6
Sciences	Mathematics	7	6.7
	Geography	11	10.6
	Natural Sciences	17	16.3
	Economy/Business	10	9.6
Fine/Applied Arts	Music	6	5.8
	Art	7	6.7
	Physical Education	3	2.9
Other		13	12.5

Workload

Almost 40% of the responding teachers (39.2%) worked full time at the school, and 60.8% worked part time. These percentages are common in the countries where data was gathered.

Religious Affiliation and Home Background

Regarding teacher religious affiliation, 93.3% of the respondents stated that they were affiliated with the Seventh-day Adventist Church. The remaining 6.7% professed other Christian religions (see Figure 5). More than 88% of the Seventh-day Adventist teachers (88.75%) were affiliated with the church for more than 10 years, and 43.3% of the teachers were raised in an SDA home.

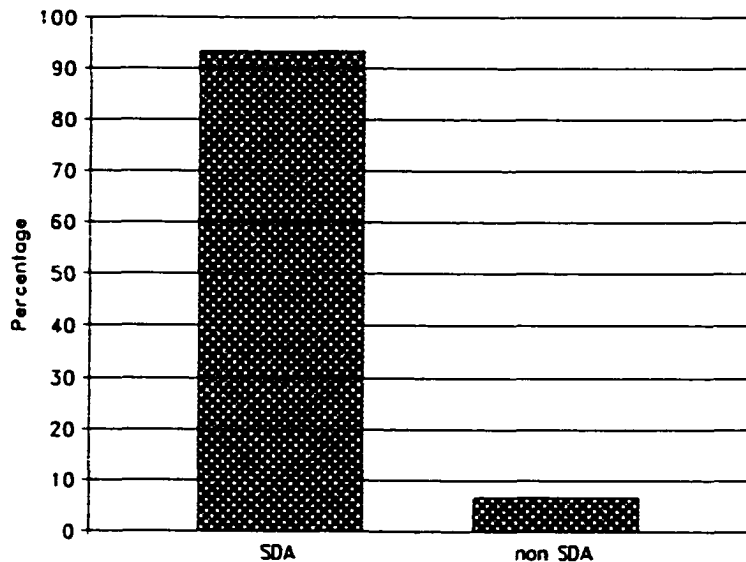


Figure 5. Religious affiliation of teachers.

Religious Educational Background

More than half of the respondents (67%) received at least some SDA education. The information summarized in Table 13 shows that only 22.1% of the teachers received their college degree in a SDA institution. Currently, there are few undergraduate degrees available in SDA colleges in the region. The college degrees that can be pursued in regional SDA institutions are the following: Theology, Philosophy, Psychology, English, and Accounting. However, the percentage of teachers who completed either secondary or elementary education in SDA institutions does not differ very much from the percentage of teachers who have completed undergraduate education (32.7 and 25.1% respectively). Only 2 out of the 104 responding teachers reported a graduate degree.

Table 13

Seventh-day Adventist Education of Teachers (N=104)

Level	Group year	N	Percentage
Elementary	None	32	30.8%
	Complete (6-8 years)	26	25.1%
	Some years (1-5 years)	12	11.6%
	No response	34	32.7%
Secondary	None	12	11.5%
	Complete (5-7 years)	34	32.7%
	Some years (1-4 years)	23	22.5%
	No response	35	33.7%
Tertiary	None	28	26.9%
	Complete (4-8 years)	23	22.1%
	Some years (1-3 years)	17	16.3%
	No response	36	34.6%
Graduate	None	68	65.4%
	Two years	2	1.9%
	No response	34	32.7%

**Religious Background of the Institutions
Where Teachers Obtained Their
Degrees**

Most of the responding teachers (59.6%) obtained their degrees in a state-run educational institution. Other teachers (29.3%) obtained their degrees in a Seventh-day Adventist institution, and a few (11.1%) in a private non-SDA institution. A good number of teachers (59.6%) reported some theological studies: 15 (14.4%) completed a B.A. in Theology, 33 (31.7%) completed a complementary course in Theology especially designed by the SDA church for professionals who received their degree in a non-SDA institution, and 10 (9.6%) attended some theology classes. Figure 6 illustrates the religious background of the institutions where teachers obtained their degrees.

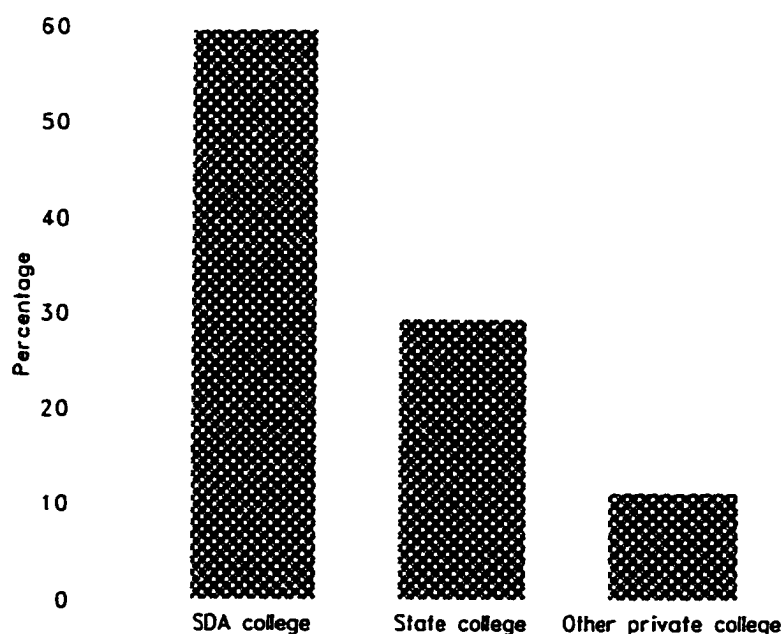


Figure 6.. Religious background of institutions where teachers obtained their degrees.

Sources of Information on IFL

Regarding the sources of IFL information, 46 teachers (44.2%) declared having attended IFL workshops, and 73 teachers (70.2%) stated that they received IFL information from other sources: 44 (42.3%) from colleagues, 35 (33.7%) from educational leaders, 48 (46.2%) from readings, and 8 (7.7%) from other sources.

Deliberate Implementation of IFL in the Formal Curriculum

This section presents information on the implementation of IFL derived from the following sources: (1) questionnaire, (2) teacher interview, (3) student interview, (4) principal and curriculum consultant interview, (5) document analysis, and (6) context.

Findings from the Questionnaire

Thirty-five percent of the 104 teachers who completed the questionnaire stated that they did not consciously implement IFL. The other 65% of the teachers perceived that they were consciously integrating faith in the formal curriculum. These teachers completed the second section of the first part of the questionnaire, which was addressed only to those teachers who consciously implemented their faith in their teaching. However, a few more teachers responded partially to this second part of the questionnaire. Appendix E contains the results from the questionnaire.

Statements related to the degree of deliberate implementation were categorized into three groups: (1) change in implementation, (2) student involvement in IFL, and (3) collegial collaboration.

Change in Deliberate Implementation

Four statements describe teachers' change in implementing IFL. Statements 21 ("This year I have found some other approaches to integration of faith and learning that might work better than what I have used before"), 24 ("I am trying new

ways to integrate faith and learning"), 27 ("This year I have revised my instructional approaches in order to integrate faith and learning"), and 31 ("I have examined ways to enhance or improve the integration of faith and learning in my classes"). The analysis of change reported in Table 14 shows that two thirds of the responding teachers during the current year have done at least something to change and improve the way they were implementing IFL.

Table 14

Teachers' Change in Deliberate Implementation (N=71)

Statement	"Very true"	"Somewhat true"	"Not true"
"I found new ways" (n=64)	32.4%	47.9%	7.7%
"I found more effective ways" (n=65)	34.8%	49.3%	5.8%
"I revised my strategies" (n=60)	22.1%	51.5%	9.6%
"I examined new strategies" (n=64)	21.1%	53.5%	10.6%

Teachers' Efforts to Involve Students in the IFL Process

Five questionnaire statements were related to students' involvement in the IFL process. Those statements were: 22 ("I am concerned about students' attitudes when I integrate faith and learning"), 26 ("I am continuously evaluating the impact of my faith and learning on students"), 28 ("I am modifying my approach to integrate faith and learning based upon the experiences of my students"), 29 ("This year I made efforts to inspire students to do their part in integrating faith and

learning”), and 32 (“I have used feedback from students to change my implementation of faith and learning in my classes”).

Table 15 shows that teachers tended to consider attitudes of students regarding IFL more than their own opinions. Ninety-six percent of responding teachers reported that they considered students’ attitudes during the implementation of IFL, but only 68% of them reported they paid attention to students’ opinions. Few teachers (27.5%) were constantly evaluating the impact of their IFL implementation on students’ lives; only 35.2% recognized that they were consistently motivating students to participate in the IFL process.

Table 15

Teachers’ Efforts to Involve Students in the IFL Process

Statements	“Very true”	“Somewhat true”	“Not true”
Consideration of students’ attitudes (n=74)	68.9%	27.0%	4.1%
Change based on students’ experiences (n=69)	40.3%	47.2%	8.3%
Motivation of students’ participation (n=50)	35.2%	43.7%	18.3%
Evaluation of students’ impact (n=63)	27.5%	43.5%	20.3%
Consideration of students’ opinion (N=63)	23.3%	45.2%	17.8%

Collegial Collaboration

Three statements were related to teachers' collegial collaboration. Those statements were: 23 ("I feel sufficiently prepared to help other faculty members at my school to integrate faith and learning"), 25 ("This year I met regularly with other faculty in discussing the implementing of the integration of faith and learning"), and 30 ("This year I coordinated my effort with that of other teachers to maximize the effect of the integration of faith and learning at my school").

Table 16 shows that very few teachers were involved in collegial efforts to integrate faith and learning in their classes. About 45.8% of responding teachers have met regularly with other teachers to discuss IFL, and 41.4% of teachers coordinated their efforts to improve the IFL in their school.

Table 16

Teacher Collegial Collaboration

Statement	"Very true"	"Somewhat true"	"Not true"
Knowledge to help others (n=67)	16.2%	44.1%	23.5%
Interchange of ideas (n=70)	12.9%	32.9%	21.4%
Collegial efforts (n=50)	7.1%	34.3%	28.6%

Findings From Teacher Interviews, Student Interviews, and Documentation

Teacher interviews, student interviews, and document analysis provided enough information to identify teachers in a certain level of implementation. Some exemplary cases for each level follow:

Level 0

Level 0 consists of those teachers who do not have a clear knowledge of what the integration of faith and learning means or are not interested in deliberate implementation. These teachers may emphasize extracurricular IFL because they do not know the biblical principles and values that undergird their subjects, or, knowing the theoretical meaning of IFL do not know how to implement it in their classes. Other level 0 teachers find difficulties in the subject they teach. Teachers at this level may have other priorities in mind, or, knowing how to integrate, lack the necessary motivation to do it. Hence, students of these teachers do not perceive any integration between faith and the subject. If the teacher strongly believes that there is no relation between their subject and religion, students tend to identify with that dissociation. In short, teacher course plans at level 0 failed to include evidence of integration. Illustrative cases follow.

"I do not know how to implement integration in the curriculum": The case of Nancy

Nancy was a music teacher in her 20s. She was the academy choir director and loved music. She believed music can be used by the teacher as a means of teaching values. However, she said that her course plan did not allow her to integrate: "I believe that all I can do right now is to relate my faith to other areas, rather than to music." She explained in detail how she helped students to improve their self-esteem by encouraging them to list and share with the class the positive characteristics of their classmates, or by giving a religious music cassette to a student with problems. "The most I can do is to bring religious music to my classes. But not everyone enjoys that kind of music. My students prefer secular music. I do not know what to do." She does not know any biblical principles that relate to music. Her students did not remember any integration carried out, and course plans did not have any reference to integration.

"It cannot be implemented in my subject"
The cases of Sonia and Rebecca

Sonia, a math teacher with more than 15 years of teaching experience, explained that IFL "is looking for an application where it is possible to share our faith . . . but you have to have splendid illumination to do it in each theme." She explained a concrete example that she heard from a nun:

It is like teaching division. You take two numbers, if we take one and it is not enough, what happens? One number has to lend to another number. It is the same when we give something to those that are in need. It is simple, but that is what I understand [Teachers interviews were translated from Spanish].

She explained that she cannot integrate faith in mathematics. She could not find any biblical principle relating to math. Each relationship she could think of was artificial, and she rejected any artificial relationship. However, she stated,

All my activity [in IFL] is extracurricular. In working daily with the students I care for their problems and needs. But not in the subject. I do not know how to do this with my subject. I do not know if it is possible.

Two of her students identified extracurricular integration such as singing spiritual songs at the beginning of the class, praying for students' special requests, and dialoging about students' spiritual concerns. One of the them, a senior, explained, "We have math early in the morning. We sing and pray, but in this subject you cannot do much more than that."

Rebecca, a math teacher from another school, told me that she had attended an IFL workshop a few years ago. At the workshop she learned that IFL is blending the subject with doctrines of the church. However, she did not agree with that idea. She thought that it was too superficial, too artificial. She said that "IFL is not bringing up the name of God while I am teaching, but showing His character throughout all the subject, and by revealing it in myself." Rebecca assured me that she could not plan that integration; thus, she waits for a spontaneous situation. Sometimes that situation happens, sometimes it does not. One of her senior students explained,

For instance, in math it is almost impossible to teach about God, but, if the teacher cannot relate the subject with God, at least the teacher should build a good relationship with students. We do not want a pure and scientific math class, we want the teacher to be a friend.

Rebecca's course plans did not include IFL.

"I have other priorities in mind": The case of Mario

Mario, a music teacher, is too busy with other priorities to consider IFL.

Although he included some objectives toward IFL in his course plan, he did not follow through with it. He said that if something came up that could be related with faith, he took advantage of that opportunity, "But right now I'm not doing much. I'm working in cooperative learning, in trying to teach students to work in groups. I'm focused on that." None of Mario's students mentioned him as a teacher who is accomplishing integration, and his course plans did not include integration. He included in his course plans some of the school's general objectives which related to IFL, but did not translate these objectives to his subject objectives or activities.

"I know how to integrate, but I'm not doing it right now": The case of Mary

Mary, an experienced chemistry teacher, had attended an IFL workshop a few years ago. She was interested in IFL and made some concrete proposals on how to integrate faith and chemistry, but never applied any of them. She understood that IFL was not just mentioning the name of God as Creator, but guiding students in investigation so they themselves can generate the IFL. I asked her the reasons for not implementing the knowledge she has. Mary gave three reasons: (1) lack of support from the principal ("Our academy is not concerned with IFL. We do not have a leader to motivate us"), (2) lack of time ("I do not have enough time to spend in IFL. The government course plan is quite strict"), and (3)

lack of cooperation ("We [teachers] are not working together. If we can collaborate with one another, we then can make IFL sense to students").

Mary was doing nothing toward becoming involved in IFL, although she knew what could be done. During the interview she gave some good ideas on how her school could implement IFL more efficiently, and concluded by saying, "I hope these ideas can help you in your research." However, she did not mention that she was going to implement any of them! Her students did not mention her class as one in which integration is present, although one junior student explained that chemistry is "too scientific" to be related to spiritual issues. Her course plans did not present any evidence of the integration of faith and learning.

Level 1

Level 1 includes teachers who believe that IFL can be intentionally incorporated within their subjects, but do not know how to do it. They are interested in implementing IFL in their classes, and are therefore gathering information and looking for ways to do so. Students of teachers in level 1 do not perceive any integration in their classes, and course plans do not include any kind of integration.

"I have little knowledge": The cases of Daniel and Andrew

Daniel is a physical education teacher in his second year at the school. He had been teaching in public and Catholic schools. He learned about IFL by listening to the principal talk about IFL at teachers' meetings. Although he did not know exactly what IFL was, he believed that IFL was showing students how important Jesus is for them.

First I want to be a good model, having good Christian attitudes. Teenagers today need models, it is a pity that the ones they are using are not good ones. I always say to them that the best model is Jesus. . . . I want my modeling to open a way to dialogue.

Daniel recognized that IFL was new for him. He wanted to learn how to integrate, how physical education could be related to students' salvation. Neither Daniel's students nor his course plans mentioned that any integration was being carried out by him.

Andrew was a geography teacher who had attended some lectures and read some materials on IFL but still did not feel confident enough to include IFL in his course plan. "I'm not planning [IFL] right now, although sometimes it may appear in my classes, without planning. In some classes it is easier than in others. I wish I could plan it in a non-artificial way."

Andrew believed that the most important task of a Christian teacher was to see secular subjects as a means of portraying God, where each subject has a "biblical taste." But he did not know how to do it, or where to find information. What he had read was too general and offered little help for his needs.

It is a very important issue [IFL], and there is little information on it. We do not know how to do it. I feel that in my classes something is lacking. I have the burden that I'm only transmitting knowledge, merely that . . . something is lacking.

He would like to attend a specialized IFL workshop for geography. He dreams of the day a group of Christian geography teachers could write some guidelines on IFL.

I interviewed three of his students, but none of them mentioned any IFL carried out by Andrew. His course plans included two general objectives related to integration: (1) to recognize God as Creator, and (2) to get involved in ecology and the stewardship of God's creation. But these general objectives failed to extend into the planning of the units.

"I am looking for appropriate ways"
The case of Paula

Paula, a skilled keyboarding teacher, relied on personal testimony, Bible classes, Week of Prayer, and other special weeks as the best ways to carry out

faith-learning integration. "I do not know if this is enough, that is why I try to do my part in the class." She enjoyed working individually with each student and not giving general lectures to the whole class. She gave me some concrete examples of the individual interest she has shown to students with problems in her class, and how they have improved.

Paula's concerns regarding IFL in the formal curriculum motivated her to create a keyboarding workbook, including Proverbs and other quotes. Paula felt that students can receive the inspirational message while typing. She still has not implemented her workbook, but had been trying some of her materials to see if students could profit from them.

Paula had been trying more or less systematically to infuse values such as order, neatness, and honesty, but did not include them in her course plan. She is not sure if she is doing the right thing. She would love to talk with other Christian keyboarding teachers.

The students I interviewed from Paula's classes did not recognize any integration in their keyboarding classes, and objectives and activities of her course plans did not include IFL.

Level 2

Level 2 teachers have not yet intentionally implemented IFL in their classes, but they already have enough information to introduce it systematically and have concrete plans to do so shortly. Students do not recognize IFL in level 2 teachers, and course plans do not include objectives or activities toward integration.

"I'm going to incorporate in my course plan some IFL I have tried": The case of Felix

Felix was an accounting teacher in his first year of teaching. After he graduated from a Christian university, Felix got a job as a treasurer in a small school, and, although he did not like teaching, was assigned to teach accounting.

IFL was for him something “canned.” “It was a forced way to introduce religion.” Felix told me that during student teaching they were required to find a spiritual application for each class, which was not an easy task. Consequently, he rejected IFL. But during that school year he had tried incorporating some Christian values—order, integrity—and he was pleased with the results. Felix was surprised to find these values as basic principles for accounting, and decided to introduce them in the new year’s course plan.

Neither Felix’s course plans nor his students identified integration.

“I have decided to systematically introduce some things I know”: The case of Milton

Milton was an experienced art and English teacher. He had been involved with IFL in the past. A few years ago, he compiled some guidelines to integrate faith with math, language, sciences, and history, which he shared with me.

Although Milton had been involved with IFL, he recognized that “during the last years I have not given it enough emphasis. But I promised myself to integrate more intelligently and systematically during the next year.”

Milton’s course plans did not mention integration, and the guidelines he shared with me proposed activities toward level 3 integration. Students of his art and English classes did not mention any integration.

Level 3

Teachers included in Level 3 are deliberately implementing integration of faith and learning in their classes, but no coherent worldview is presented. Thus, their integration is either superficial or irregular. If they are only using Bible verses, religious songs, or other religious material without any coherent or meaningful relationship with the subject, it is superficial implementation. It is irregular when teachers relate only a few topics of the subject with values, religion, or faith, but do not continue the integration systematically throughout the subject. Other teachers

in Level 3 are against planned integration supporting, rather, spontaneous and unplanned integration. Many emphasize either the modeling aspect, or the content aspect of integration, and do not have a clear profile of a Christian teacher in their subject.

The course plans of teachers in level 3 may include some integration at the level of general objectives in a particular unit, or in activities that propose a superficial integration.

Superficial and meaningless IFL: The cases of Susy and Lilian

Susy received her B.A. in Natural Science 6 years ago. She started teaching in a small Christian school, where teachers collaborated in student formation through individual relationships with students outside the classroom. Last year she moved to a big Christian school, and found no collegial collaboration. "It is a lot more difficult working here. I found a professional student-teacher relationship where, it seems to me, students and teachers do not cooperate, but rather take a defensive position." Thus, in attempting to integrate faith with the subjects, she systematically requested, in each test, comments from Bible verses related to the subject. "Some students left that question blank in the first tests, but then they began to write something or other because I assign great value to that question." However, there was not any further dialogue with students. Susy expressed that she was eager to use her creativity in better ways, and to learn more effective ways of integration.

All three students I interviewed in Susy's classes recognized her integration. A sophomore girl said, "In biology class it is very clear that God created man." Another sophomore student mentioned,

What I remember most are the tests. The teacher always included a question on one or two Bible verses, and we had to find out how they were related to the topic of the test. At first, I had no idea how to figure this out, but now I am used to it because other classmates helped me.

She explained that they did not discuss these texts until after the test, which is why it was hard for her at first.

Course plans were not available, but the teacher provided me with nine sample tests where she included Bible verses.

Lilian, a new English teacher said: "I have very little experience, but during this year I have been realizing many things I can do although I'm not doing everything. We sing religious songs, and I write Bible verses on the board." She recognized that it was not always easy for her to relate the grammar of a second language with spiritual issues, but she wanted to do something.

Neither course plans nor Lilian's students mentioned integration in her English classes.

*Irregular use: The cases of Nora,
Roberto, and Eric*

Nora has been teaching math in the same school for more than 20 years. She was concerned with the integral formation of students, and rejected artificial integration. Most of her deliberate integration took place outside the subject. "I stop everything when students ask questions. I tell them that their formation is of more worth than math." Her emphasis on integration is on her modeling; however, she introduced some objectives in the course plan. "In teaching percentages I have included the biblical tithe. Maybe they will forget about percentages but I hope they will not forget about tithe."

Nora's course plans included one general objective related to IFL, which was "to value the infinite wisdom of God and His laws that rule matter and the universe." One unit had separate activities for IFL that included the grouping of finite and infinite species. One of her students mentioned one example of Nora's integration by saying that "when we studied quantities or measures, we looked to Bible measures and converted these measures into current ones."

Roberto received his B.A. in Philosophy and Psychology last year from a Christian university. He was anxious to implement integration of faith and learning in his Bible and philosophy classes. He included IFL in his course plans in some themes, but found it very hard to implement because of the negative reaction of some students.

I included some general objectives in my course plans because I did not know how it was going to be. I tried to insert a spiritual application after each topic, something like a little spiritual homily. But I have problems with a large number of non Christian students who make IFL more difficult for me.

Roberto's course plan for philosophy included a general objective expressed in the following: "To elaborate critical judgment from a Christian perspective." One general objective in his Bible course plan stated: "To reflect on how God is with the human being through history." However, none of his students recognized Roberto's efforts of integration.

Eric was a geography teacher who taught in two schools. He felt overwhelmed with his tasks and complained that he needed more time to plan IFL.

It is easy in geography. I believe that each topic can be integrated. Although I had it in mind I did not plan my integration. I believe I can do better in Creation and Evolution although I'd need more time and materials to do a better job.

Eric's course plans showed an activity related to integration (e.g., reading about the Flood in Christian sources and discussing it). The three students I interviewed agreed that Eric's integration was based upon two themes, the Creation and the Flood. "When he speaks about the mountains, he explains about the Flood," said a student. "In geography we talk about Evolution. Many people speak about millions and millions of years, but we take out these zeros," expressed another student.

*Unplanned and spontaneous, but deliberate
The cases of Oscar and Ernest*

Oscar taught biology. He explained to me that he has a personal idea of how to implement IFL.

To me, IFL is so sensible and dynamic that it may fit in at any moment. It may appear in ten consecutive classes, and it may not appear in another ten. I do not like systematic integration because it is too structured. I believe that IFL cannot be planned, because it may become fictitious. I do it spontaneously, so students perceive that we are living the faith, and we are not pretending. IFL should be natural.

Oscar thought that planning IFL may provoke negative effects in students. He thought that including IFL in his course plan is like including extraneous elements in Science. For this reason, he did not include integration of faith and learning in his course plans. Three out of four of Oscar's students I interviewed mentioned that he related spiritual issues with the subject, but were unable to give concrete themes or examples.

Ernest taught music in the same school for more than 20 years. His concerns were more related with the harmful influence of the media on students than on the IFL he could carry out.

I do not have a clear idea [of IFL]. I do it spontaneously. I pray for God's illumination. I know that prayer does not replace planning, but many times spontaneity gives freshness. However, I believe planning may help. Of course I use the Bible when I talk about the music in the Bible, but besides that I am spontaneous.

Ernest's course plan included some general objectives related to integration: (1) to recognize music as a divine art, (2) to differentiate sacred music from secular music, and (3) to value the importance of religion in the modification of music during the Middle Ages. Nevertheless, his students did not recognize any relation between the subject and religion in his classes.

Level 4

Level 4 teachers include both the modeling and the content aspects of integration in their definition of IFL. They are concerned with presenting a coherent worldview to their students. Although having incorporated IFL in their course plans, they think it should to be naturally implemented. Teachers at this level focus their IFL interest on their role as teachers rather than on the IFL students may

accomplish. A stabilized implementation of IFL makes level 4 teachers satisfied with what they are doing and hence do not consider changing their strategies. Students recognize integration with teachers at level 4 and are able to mention concrete examples, but perceive that they are not very much involved in the integration process. Course plans include at least general objectives on integration, and frequently unit objectives and activities are related to IFL.

Stabilized implementation—Little change
The cases of Miriam and Linda

Miriam did not have a Christian education background when she received a call 12 years ago to teach history and ethics in a Christian high school. She struggled for several years trying to find ways to relate her faith with the subjects she taught. She discovered Christian principles for ethics, and a way to relate history to faith without jeopardizing her role as a historian. Regarding the planning she said, "I included IFL in my planning so I can remember to do it. In some course plans it is in a very definite way, and in others not. It is a lot of work to do it."

Although Miriam was happy with her accomplishments, she would have liked to know how she was doing, and what could be improved.

Miriam's course plans included general and unit objectives related to IFL. One general objective stated was "to relate secular history to sacred history." This general objective was fostered in a unit objective, "to compare theoretical concepts of this unit with Christ's teachings and behavior." The proposed method to accomplish this objective was to compare the lives of Alexander Magnum and Christ. Other objectives included the relationship of Bible prophecies with the history and the role of Hebrew people in world history. All three students interviewed recognized Miriam's efforts on integration. One of them mentioned the activity of comparing the lives of Alexander Magnum and Jesus as one of the most impressing activities in integration.

Linda was also an experienced history teacher who believed, "We cannot spare any opportunity to integrate." She recognized that at the beginning of her teaching she had missed many opportunities to integrate, and little by little composed a carefully planned integration for each unit: objectives, activities, and evaluation. However, little change occurred. "At the moment something occurs I may introduce some changes, but it is not frequent."

Linda's course plans are infused with IFL from the general objectives to activities and evaluation. For instance, one unit objective stated: "To reflect on the Christian viewpoint regarding the war." This objective was to be accomplished through the following activities:

Read Luke 21:10 and 26, and relate them with: (a) causes of the war, (b) consequences of the war, (c) what the Bible says about the condition of the world at the end of the history, (d) look for Bible texts relating to the selfishness and ambition of the human being, (e) compare Isaiah 14:12-23 with Ezekiel 2:8, (f) find an application to current issues in history after reading Matthew 24:6-8, 21; Luke 21:9-11, 26; Daniel 12:4; Isaiah 2:11, 12, 14-17, and 22.

One of Linda's students mentioned that "the teacher talked about the Bible in history class. She made us look up some Bible texts related to the issue we were learning." But the student also said that student participation is more passive than active and therefore not very interesting.

Level 5

Level 5 teachers focus their integration on students' responses. They have a repertoire of strategies and vary approaches according to students' responses and needs. They are constantly improving their integration of faith and learning. Although they have planned integration of faith and learning, the implementation is natural and spontaneous. Teachers at level 5 attempt to involve students in the integration process, and are alert to personal differences or concerns among students.

The case of Marlene and Luisa

Marlene grew up in a non-Christian home. She became a Christian 3 years ago, and accepted an invitation to teach math in a Christian school. The principal and other teachers told her she should integrate her faith in her classes. So she looked for information, read books, asked advice from the pastor of her church. She also asked Mary—the chemistry teacher mentioned in level 0—for help in particular issues. “When I did not find the information I needed, I would ask an experienced professor like Mary, who was always happy to give some guidance.”

Marlene enjoyed implementing integration of faith and learning in a planned and natural way.

The other day, one student told me, “Teacher, why do we have to buy so many textbooks, when for you the Bible contains everything? It contains math, history, biology. Why do we have to buy textbooks when in the Bible you find everything?” Well, I have used the Bible to give them some physics laws, and he was so astonished!

She was concerned with student response to integration. “I just look at their faces and know what they are thinking. I encourage them to draw their own conclusions.”

Although at first Marlene was not included in my random selection of teachers to be interviewed, I decided to include her because every student I interviewed in her school mentioned her as the first and best example of integration, and they were enthusiastic about integration. “Although it seems strange, the best relationship between subject and religion I see is in math,” stated a freshman student. “We look in the Bible for math and physics laws. Everyone was surprised that these laws were there long before they were discovered by any scientist. And we discussed why.” Another student said that “in math there are more relationships with faith because the subject is more appropriate. We dialogue a lot; it is interesting.”

Luisa, a young history teacher, combined extracurricular activities with curricular activities in IFL. When she was dealing with the family, she organized Family Week and involved parents in the classroom. Year after year she has been improving her IFL, and she has learned that different strategies help students become more involved in IFL.

When I find some IFL material I think is of value, I think a lot on how to implement something new. I take it to the students half done because I want them to arrive at the conclusion. I present a question, students give their opinion, and after discussion we reach a conclusion. But this strategy does not work with all students.

Luisa mentioned several strategies she uses in IFL: role playing, grouping, panel, collage, and relying on students' reaction to the topic.

Luisa's course plan stated that "history is the participation of God, mankind, and Satan in past human experiences. . . . History is to know the foundations of our current life . . . where we come from, who we are, and where we are going."

The following objectives included in her course plans were related to IFL:

- a. To know the conflict between good and evil as revealed in history.
- b. To understand God's intervention in mankind's issues.
- c. To value different worldviews, and their assumptions from a Christian perspective.
- d. To reflect on the divine purpose for this world.
- e. To demonstrate Christian behavior in curricular and extracurricular activities.

Her students recognized her integration as planned yet spontaneous. "I believe the teacher planned these activities (IFL), but we do not perceive them as such because there is a lot of dialogue and discussion, which everyone is engaged in," one junior student noted.

Principal and Curriculum Consultant Interviews

Principals and curriculum consultants were asked to what extent they perceived IFL was being accomplished in their schools. In general, they had a quite

accurate picture of what was happening in the school regarding IFL in the formal curriculum.

In school 1, the vice principal stated that in general the school deserved an 8 on a scale of 0 to 10. "We do not receive any complaints from parents regarding the IFL in the formal curriculum," he stated. "Some biology and social science teachers are doing excellently, but we still have to improve in other areas, such as sciences and art," he concluded.

"Teachers in this school are learning about IFL," explained the principal of school 2. "After the IFL workshop at the beginning of the school year, they have implemented according to their understanding and commitment. I plan to follow up teachers more closely this coming year," he concluded.

Principals in schools 3 and 4 did not express clear perceptions on the extent IFL has been accomplished in their schools. Follow-up questions were ignored. The principal at school 3 stated,

I believe that teachers are primarily concerned with teaching their subjects very well. Unfortunately not everyone is interested in IFL. It is easy to plan from the desk, but is different in the classroom. This is a very critical moment for our adolescents. I do not think our teachers forget that they are in a Christian school, but sometimes they may forget to create this moment of reflection.

The principal in school 4 stated: "I believe that in times past, when government presented some restrictions to accomplishing integration, we were more careful to do it."

Principals of schools 5 and 6 clearly explained their perception of the IFL carried out by the teachers at their school. "Regarding the IFL at the classroom level, I can tell you that in general it is asystematic and occasional," stated the principal of school 5. "Very few teachers plan what they do," he continued, "but I hope this situation will shortly be reversed." The principal at school 6 stated, "I think that IFL here is occasional, except in Bible classes where the integration is

continuous. Maybe you can find more implementation in the natural and the social science teachers, because I see them more interested in IFL.”

Factors Related to Deliberate Teacher Implementation of Integration of Faith and Learning

Several factors related to the process of deliberate teacher implementation of the integration of faith and learning are: (1) teacher knowledge of the concept and implementation of IFL, (2) teacher interest in implementing IFL in the formal curriculum, (3) teacher planning of implementation, (4) teacher management concerns, and (5) difficulty of the subject to accomplish the implementation. A presentation of findings related to the mentioned factors follows.

Teacher Knowledge of IFL Concept and the Implementation of IFL

Teachers’ knowledge on the integration of faith and learning has two facets: the knowledge about the meaning of IFL in general, and the knowledge of the implementation of IFL. The following is a presentation of the findings from different sources: questionnaire, interviews, documents, and contextual activities.

Findings From Teacher Questionnaire

Three statements were related to teachers’ perception of knowledge of IFL. Statement 1 was about the meaning of IFL (“I don’t even know what integration of faith and learning is”), statement 3 about implementation of IFL (“I have a very limited knowledge of how to integrate biblical principles into my classes”), and statement 13 concerned the benefits of IFL (“I would like to tell other departments or persons about the benefit of the integration of faith and learning”). As shown in Table 17, responding teachers perceived their knowledge differently. Half of the responding teachers (50%) thought that they knew very well what IFL means, and 22% stated that they did not know what IFL was. Almost 40% of the responding teachers seemed sure that they knew how to implement it in their classes. About

half of the teachers (48.7%) stated that they knew "somewhat" how to implement integration, and 11.8% acknowledged that did not know how to carry out the implementation of IFL for their subjects.

Table 17

Teachers' Perception on Knowledge of Integration of Faith and Learning

Statement	"Very well"	"Somewhat"	"Do not know"
"I don't even know what IFL is" (n=60)	50.0%	38.0%	22.0%
"I have a very limited knowledge of how to integrate biblical principles in my classes" (n=76)	39.5%	48.7%	11.8%

Note. These statements have reverse scores, which have been inverted to facilitate the reading.

One-third of the subjects that responded to statements 1 and 3 (regarding the knowledge of the meaning and implementation of IFL, respectively) stated that they knew what IFL means, and also reported that they knew how to implement it. Another 23% of the respondents said they "somewhat" knew the meaning of IFL, and "somewhat" how to implement it. A chi-square test for relationship between teachers' knowledge of the meaning of IFL and teachers knowledge of implementation of IFL was performed ($X^2=15.3$, $df=4$, $P=0.004$).

Relationship between some demographic variables and knowledge of IFL

Full-time teachers were more likely to know the meaning and means of implementation of IFL than part-time teachers. Seventy percent of full-time teachers reported that they knew very well the meaning of IFL, while 9% of part-time teachers reported the same ($X^2=5.50$, $df=2$, $P=0.064$). Regarding the implementation of IFL, 41% of part-time teachers reported that they knew little or

nothing about the implementation, while 19% of their full-time colleagues reported the same ($X^2=6.30$, $df=2$, $P=0.04$).

Findings From Teacher Interviews

Teacher knowledge of the meaning of IFL

Teachers were asked about the meaning of IFL. Their responses could be classified into three groups according to the focus of the answers: (1) emphasis on IFL in the hidden and/or informal curriculum, (2) emphasis on IFL in the formal curriculum, and (3) a comprehensive definition that embraces the formal, informal, and hidden curriculum.

Out of the 49 interviewed teachers, 31 of them emphasized IFL in the formal curriculum. For 20 teachers, IFL was to relate information with the Bible, God, or the plan of salvation. "I think that IFL is to integrate biblical concepts with the course plan," said a geography teacher. A biology teacher expressed that IFL "is to relate spiritual aspects with the subject," and a Bible teacher said that "IFL is to relate information with the plan of salvation—in other words, to reap spiritual benefits from the subject." A mathematics teacher added that "IFL is to present natural relationships between the subject (reality) and spiritual things." Other teachers (4) thought that IFL was to apply biblical knowledge or faith to the subject taught. "It is to apply our faith in teaching," said an accounting teacher; a mathematics teacher expressed that "IFL is presenting an application where we can share our faith." A third group of teachers (7) expressed that IFL was to examine the subject, reality, from a perspective of faith. "IFL is having the Bible as the interpreter of reality (or the subject)," was the definition of a philosophy teacher. An accounting teacher said that IFL is "to look at reality with Christian glasses."

Other teachers (8) emphasized the transmission of faith through modeling. "IFL is living a Christian life," said a chemistry teacher, "IFL is a personal issue; if I

am a Christian I will naturally transmit my religious lifestyle to my students,” expressed a history teacher. An accounting teacher emphasized teachers’ perception of students by saying that “IFL is to see students as something more than students, it is to be personally interested in them.”

Only a few teachers (2) perceived IFL as comprising all aspects of the curriculum. “IFL deals with the integral formation of the students and their salvation: it is living the Christian life, taking advantage of every opportunity to reinforce Christian beliefs, and presenting the information in such a way that our beliefs are there,” said a literature teacher. A philosophy teacher expressed that IFL is an enterprise that involves the whole school, and should be Christ-centered, Bible-based, and service-oriented. The remaining 10 teachers did not express a clear definition of IFL.

*Teacher knowledge of biblical principles
or themes that undergird the subject*

Teachers were asked about their knowledge of biblical or Christian principles that undergird their subjects, and are the basis of their implementation of IFL in the formal curriculum. As a point of reference, I compiled some basic principles shown in Appendix D.

The majority of teachers (41) were able to mention at least one biblical principle that undergirded the subject/s they taught. Very few (6) mentioned two undergirding themes, and 2 teachers mentioned three undergirding themes. All the history teachers mentioned the role of God in world history, and the relationship between history and the great controversy between Satan and God that takes place in this world before the whole universe. Geography and biology teachers stated that the themes of God as Creator of the universe, the world, and the human being, as well as the responsibility of human beings to be stewards of God’s creation, were basic in the IFL. Philosophy, psychology, and Bible teachers mentioned the

Christian concept of the human being as a holistic being, created in God's image. A few of them (2) completed the idea of man by saying that now mankind is marred by sin, and must be redeemed through Christ. Business and accounting teachers mentioned the biblical principles of economy, as well as God as the owner of all resources as the essential themes for IFL. Fine arts teachers mentioned the notion of beauty and art as a way to praise God, whereas applied arts teachers emphasized the concepts of excellence and service as central in the IFL of their subjects. Mathematics, computer, and keyboarding teachers mentioned the importance of values such as order, honesty, and the relationship between God's laws and man's laws in the IFL process.

Teacher knowledge of the IFL implementation

Teachers were also asked about their knowledge of the implementation of IFL in the formal curriculum, particularly in the subjects they taught. Questions dealt with teachers' perceptions of the appropriateness of planning implementation, the relationship between the school's general objectives, the teacher's goals for the subject, and the perceived ideal way to implement IFL in the subject.

Teacher knowledge of the pertinence of planning in the implementation of IFL. Regarding teachers' perception of the pertinence of planning IFL, teachers' responses varied from strongly rejecting to firmly supporting the planning of IFL in the course plan. Thirty-one teachers expressed that IFL should be included in the course plans, whereas 10 teachers were not sure about the inclusion of IFL in the course plans, and 8 directly rejected the planning of IFL. "I think it cannot be planned," assured a mathematics teacher. "It is possible to integrate when the issue appears spontaneously, but it is something you cannot plan in advance," she concluded. A music teacher was not sure about the planning. He said,

I do not have a clear idea whether it [IFL] should be planned or not. I'm not planning it right now. I pray for God's illumination. I know that this cannot replace planning, but it has the freshness of spontaneity.

Although the majority of the interviewed teachers (31) supported at least some IFL planning, they highlighted that the planning should be carried out spontaneously. A history teacher expressed this idea by saying, "I think we should include IFL in our course plans, but it should appear spontaneously in the classes." On the other hand, some teachers (3) recognized that planning is not enough for implementation. "It would be very nice to include IFL in your planning. This way the administrators of your school may think that you are doing great, but it is only on paper, not in the reality of the classroom."

Teacher knowledge of general objectives of the school and its relationship with teachers objectives for the subject. Teachers were asked if they knew whether their school had general objectives, if these included IFL, and what the relationship was between school objectives and the teachers' course plan objectives.

All the interviewed teachers (49) were sure that they knew that the school had general objectives related to IFL, but none of them was able to mention even one of these objectives. Many referred to the purpose of Christian education in general, but, "I do not remember," or "this is my second year in this school, and I am not quite acquainted with school objectives yet," were common answers to follow-up questions. Regarding the connection between school objectives and course plan objectives, a philosophy teacher explained, "The institutional objectives are clear. Some aspects are related to IFL. However, what happens is that in written form it seems very easy, but if the teacher is not engaged with the mission of Christian education, it is in vain." A psychology teacher explained the dissociation between school objectives and teacher objectives by saying,

Sure, we have school objectives. I worked in revising them a short time ago, but there is a dissociation between the written objectives and practice. There is no connection between the objectives and reality. I believe that neither teachers nor students have a clear idea of what are the real objectives of this institution.

However, a history teacher had a perception of what he and his colleagues in the social sciences area of his school were trying to do: "The school has institutional objectives. We discuss these objectives in our subject area meetings, and include those that are related with what we are doing. Then, each teacher applies them in his/her particular subject."

Teacher knowledge of the ideal implementation of IFL in the subject.

Teachers were also asked what they perceived was the proper way of integrating faith in the subject they teach. Many (22) were sure that they never had thought about that; others (9) expressed "I do not know," and a good number of teachers (13) ignored the question and started explaining what they were doing. "I have not thought much about that, but let me tell you what I am doing right now," was a common response. Follow-up questions made them reflect on their perceived weak areas. "I think I should use the Bible more, particularly in ancient history, and to present Creationism, because the textbooks I use now do not include much in these areas," said a history teacher.

Findings From Principal and Curriculum Consultant Interviews

Principals' and curriculum consultants' knowledge of integration of faith and learning

All the principals and curriculum consultants stated that IFL is essential in their Christian school. However, their definitions of IFL varied. For some principals (3 out of 7), IFL is the transmission of faith through the teacher lifestyle. However, other principals (3) observed two sides of IFL: the personal testimony of teachers and administrators, and the content-faith relationship. "IFL is the teacher who embodies biblical principles, who is an imitator of Jesus, and who relates subject content with biblical principles whenever appropriate," expressed one boarding-school principal. "IFL is the personal testimony and relationship between revelation and science," declared a curriculum consultant. Other principals (3) perceived IFL

as a complex task involving the students' integral formation. "IFL is integral education that includes the physical, social, spiritual, and intellectual aspects of the individual," expressed a principal. Another stated that "IFL is to nurture students' faith in order to maintain fidelity and integration in the church."

Principals' and curriculum consultants' knowledge on planning of IFL

Principals and curriculum consultants acknowledged the importance of planning IFL both at the school and teacher level, but they also shared their concern about the artificiality of many planned activities. One boarding-school principal said, "Although I believe that IFL should be included in teachers' course plans, I saw much artificial planning in IFL, and I know that students reject artificial IFL. Many times the best opportunity to integrate comes spontaneously." This concern was also expressed by a curriculum consultant. She said,

Including IFL in the course plan is too forced. Many teachers include IFL in their course plan naturally in different units, but I do not encourage them to include IFL as objectives because it is not possible to measure; it cannot be evaluated.

**Context and Organizational Activities
Related to the Knowledge of IFL**

*Previous IFL training and
teacher knowledge of IFL*

In two of the selected schools, previous IFL training received by teachers affected their perception of the meaning of IFL and their knowledge of implementation. Teachers at schools 5 and 6 had attended IFL workshops during previous years that emphasized IFL as a systematic inclusion of biblical content in the subject matter. "The instructor told us that IFL is to mix the subject with doctrines of the church. I do not agree with that," expressed a school 6 teacher. "That is too superficial, too forced. I believe that IFL is not just mentioning the name of God when I am teaching," she added. This training distorted the meaning

of IFL to the extent that many teachers, after mentioning that they did not support that idea, relegate IFL to the informal and hidden curriculum.

The place of institutional objectives and the knowledge of IFL

Every selected school provided me with a well-organized statement of purpose, general objectives, and profile of the student based upon a biblical concept of humankind. For instance, school 2 included in its general objectives for administrators, faculty, and staff, to "promote individual education in order to bring the student closer to the Divine Model," and for the curriculum "to integrate Christian principles in the course content." School 1 stated as a general objective for the student: "To value the spiritual benefits of Christian principles supported by the Scriptures, through a life of love, respect, and service to God, the Creator, and to our neighbor."

Although each school had objectives that were very well stated, I observed that they were not accessible or frequently used. School 1 kept the only available copy of its general objectives in an oversized folder especially designed to be shown during surveys. The principal of school 2 could not find a copy of the school objectives at the school, and brought me a copy in draft form the following day. In school 3, the general objectives were kept in a folder, that was dusted before being handed to me. The last copy of general objectives that the secretary of school 4 could find dated from 1990. When I requested the general objectives of school 5, the principal's secretary showed me a very nicely designed folder that was compiled for the school survey a few months prior to my investigation. Although I was not allowed to handle it because "it needs to be kept in good shape for the next survey," the secretary made photocopies of the pages I requested. In school 6, the principal had well-organized school objectives, but few teachers had transferred these objectives into their course plans. The principal told me that he

was working with helping teachers to become acquainted with school objectives and to plan their subjects with these objectives in mind.

Summary of Teacher Knowledge of IFL

Findings from the questionnaire indicated that there is a direct relationship between the knowledge of the concept of IFL and its implementation. Only one third of the teachers who responded about the concept of IFL and its implementation perceived that they knew very well what IFL means and how to implement it in their classes.

Teacher interviews confirmed data gathered from the questionnaire. They showed that the majority of teachers could give some definition of the meaning of IFL. Although most teachers emphasized the content-faith relationship in the IFL process, in general, they were not able to mention more than one theme or biblical principle that undergirded the subject they taught, and they consistently avoided the question "How should a Christian teacher be implementing IFL in the subject you teach?" In general, teachers recognized the importance of planning the implementation of IFL, but they rejected the planning that promoted artificial or superficial IFL.

Principals' and curriculum consultants' concepts of IFL tended to include the hidden, formal, and informal curriculum. Regarding the planning of IFL in the formal curriculum, principals tended to support the planning as long as the implementation was fresh and spontaneous.

Document analyses and field notes suggest that although all the schools have well-developed general objectives that included IFL, these objectives were not easily accessible to teachers, and were not used regularly as a basis for the planning of the subjects.

Relationship Between Knowledge and Levels of Implementation

A comparison between teachers' implementation and their knowledge of IFL shows that there is a close relationship between teacher knowledge of IFL and teacher level of implementation. Teacher knowledge of implementation of IFL, as well as perceptions of the importance of planning IFL, appears to be relevant in determining the extent of IFL implementation by teachers.

As expected, teacher knowledge of the meaning of IFL is not enough to implement IFL in the formal curriculum. The higher the perception of knowledge of implementation, the higher the level of implementation. Teachers who failed to mention any biblical principle, theme, or value that undergirded their subject were placed in levels 0 or 1 of deliberate implementation. On the other hand, teachers in levels 4 or 5 knew a wide repertoire of biblical principles, themes, and values, as well as methods to approach integration.

Teacher Interest in Integration of Faith and Learning

Findings regarding teacher interest in the integration of faith are presented from different sources: questionnaire, teacher interviews, student interviews, and principal interviews.

Findings From the Questionnaire

Six statements in the questionnaire were related to teachers' interest in IFL. Statement 7 ("I am not concerned about integrating faith and learning") was related to the general interest of IFL, whereas statement 6 ("I would like to know how the integration of faith and learning affects students") showed an interest in how IFL affects students. Statement 10 ("I would like to know what resources are available if we decide to adopt integration of faith and learning") referred to resources available for IFL implementation. Statement 16 ("I would like to know what the implementation of faith and learning will require of me") addressed the

requirements for IFL implementation, and statement 18 ("I would like to know what faculty in other schools are doing in this area") expressed teachers' interest in knowing IFL experiences from colleagues. Finally, statement 19 ("I would like to know how a deliberate integration of faith and learning will improve what I am doing now") declared teachers' interest in the benefits of IFL.

Table 18 shows that the greatest number of responding teachers (81.6%) were strongly interested in IFL, and 83% were very interested in learning from their colleagues' experiences. Two-thirds of the teachers were also interested how IFL affects students, but only 36% of them seemed very interested in knowing what is required to implement IFL.

Table 18

Teacher Interest in IFL (N=104)

Statement	"Very interested"	"Somewhat interested"	"Not interested"
"I am not concerned about IFL" ¹ (n=49)	81.6%	12.2%	6.1%
"I would like to know what faculty in other schools are doing in this area" (n=100)	83.0%	16.0%	1.0%
"I would like to know how the IFL affect students" (n=100)	76.0%	21.0%	3.0%
"I would like to know how a deliberate IFL will improve what I am doing now" (n=97)	68.4%	28.9%	3.1%
"I would like to know what resources are available if we decide to adopt IFL" (n=93)	69.8 %	26.9%	3.2%
"I would like to know what the IFL will require of me" (n=84)	36.9%	52.4%	10.7%

¹ This statement has reverse scores, which have been inverted to facilitate the reading.

Relationship between some demographic variables and teacher interest in IFL

Teaching experience and interest in IFL resources. Chi-Square test to measure the relationship between teaching experience and teachers interest in IFL resources was performed ($X^2=14.25346$, $df=4$, $P=0.006$). There was a significant difference in interest in IFL resources between experienced teachers and new ones. Teachers with 1 to 5 years of experience were more interested in resources available for integrating faith and learning than were more experienced teachers. Table 19 shows that 85% of teachers in their first 5 years of teaching were very interested in IFL resources, whereas 52% of teachers with 6 to 10 years of experience expressed the same interest.

Teaching experience and interest in the requirements for implementing IFL. Less experienced teachers are more interested than experienced teachers in knowing what IFL will require from them. Table 20 shows that more than a half of teachers with 1 to 5 years of experience were very interested in the personal requirements for IFL. This interest decreases to 13% in teachers with 6 to 10 years of experience, and finally shows a small increase in interest in experienced teachers.

Theological training and teacher interest in how IFL affects students. There are differences between teachers who have received theological training and teachers who have not, in their interest in how IFL affects students. Teachers who did not have theological studies were more interested in knowing how IFL affected students than teachers with that training. Table 21 shows that 89% of teachers with no training in theology were very interested in knowing how IFL affected their students, whereas 69% of teachers with theological training expressed the same interest. Appendix F presents other chi-square test results that were not meaningful for this study.

Table 19

Teacher Interest in IFL Resources (N=104)

Teacher experience	"Very interested"	"Somewhat interested"	"Not interested"
1-5 years	85.3%	14.7%	—
6-10 years	52.0%	48.0%	—
11 or more years	68.8%	21.9%	9.4%

Table 20

Teacher Interest in Personal Requirements for Implementing IFL (N=104)

Teacher experience	"Very interested"	"Somewhat interested"	"Not interested"
1-5 years	52.9%	41.2%	5.9%
6-10 years	13.0%	69.6%	17.4%
11 or more	34.6%	53.8%	11.5%

Table 21

Teacher Interest in How IFL Affects Students (N=104)

Condition	"Very interested"	"Somewhat interested"	"Not interested"
Teachers without theological training	89.5%	10.5%	—
Teachers with theological training	69.5%	25.4%	5.1%

Findings From the Interviews

Teacher interviews

A general interest in IFL was perceived in every teacher interview. Although I did not ask any direct questions regarding their interest in IFL, I perceived that the teachers were committed to Christian education, and were interested in supporting integration at all levels of the curriculum. However, teacher interest in the integration of faith and learning in the formal curriculum was assessed by asking what kind of support they would like to receive from the school or the church educational system to improve the IFL they were carrying out.

Seventeen of the 49 interviewed teachers declared that they would like to have more ideas on the implementation of IFL, to learn better methods to carry out a more effective integration, or to receive personal guidance from an experienced teacher or an IFL consultant. "I would like to learn to implement a more systematic and planned integration. I need concrete ideas and methods for my subject," said a literature teacher. Sixteen teachers expressed their interest in finding resources that would help them to integrate more efficiently. "I need more materials with ideas; I am working alone." The interest in collegial collaboration or team work within the school was mentioned by 7 teachers. Another 3 teachers stated that they needed more time. "Something I need is time to plan and elaborate a more effective integration. I am doing many things spontaneously, which I could do better if I had time to plan," expressed a philosophy teacher. Twelve teachers expressed needs not related to the implementation of IFL, or did not verbalize any need at all.

Student interviews

The totality of interviewed students stated that they expected the integration of religious principles with the subject, because they were attending a Christian school. All the students I interviewed expressed that they had spiritual concerns,

and were interested in the integration of faith and learning as long as they were allowed to actively participate in the integration. "I am interested in spiritual correlations if I can participate, if there is dialogue. I believe that my classmates think in the same way," expressed a student from school 6. "If somebody does not like these relationships, he or she remains quiet, because he or she knows that this is a Christian school," added another student from school 4. "Many times our interest depends upon the way the teacher presents spiritual things," expressed a student in school 2. All interviewed students believed that there was no difference between the interest in IFL expressed by Seventh-day Adventist students and by non-Seventh-day Adventist students. All of them recognized that, in general, Seventh-day Adventist students know more about the Bible than non-Seventh-day Adventist students, and sometimes non-SDA students were surprised by some relationships, but the interest depended on the way the teacher presented these relationships (i. e., the degree of spontaneity, and the participation of students). The higher the spontaneity and students' participation, the higher the students' interest.

Principals' and curriculum consultants' interviews

Out of the 11 principals and curriculum consultants interviewed, 6 stressed their interest in developing collegial collaboration toward the integration of faith and learning. They agreed that the best way would be by having an in-school IFL consultant to address the particular needs of teachers, students, and administrators. One boarding-school principal expressed his interest in a comprehensive approach to improve IFL in his school. He said,

It is very clear that we are concerned with the spiritual life of students. We are involving three-fourths of the student body in missionary work, and we have a good manual work program. However, the way to carry out integration in the classroom, in the formal curriculum is not very clear. I would like to have a consultant come to the school to give us some guidance on implementing it

more systematically. It would also be helpful to have a publication to share ideas and experiences, to keep the light of faith alive.

The remaining five administrators differed in their interests. One of them was interested in solving the problem of lack of a trained Bible teachers, whereas another wished to have more time and knowledge to help his teachers in the IFL implementation process. Two administrators stressed the need for teachers totally committed to Christian education, and one principal did not express any particular interest in the implementation of IFL.

Summary of Teacher Interest in Integration of Faith and Learning

Questionnaire findings on teacher interest in the integration of faith and learning indicated that the immense majority of teachers (81.6%) expressed their general interest in IFL as well as in knowing how other colleagues are implementing IFL. However, less than half of the teachers were interested in knowing the requirements for implementation (see Figure 7).

Teachers, students, and principals expressed their interest in IFL. For teachers, their major interest was to learn of resources, ideas, and methods to improve their implementation. Students were interested in active participation in the IFL process, and in a meaningful, natural, and coherent integration. Principals were interested in improving the implementation of IFL in the formal curriculum by developing collegial work with the help of a consultant.

Relationship Between Teacher Interest in IFL and Levels of Implementation

Although most of the teachers manifested a generally high interest in IFL, the emphasis of interest varied according to the level of implementation they were accomplishing. Although level 0 teachers verbalized general interest in IFL, they did not state any interest in any specific aspect of IFL. Teachers in levels 1 and 2 were very interested in getting more information on implementation, whereas teachers in

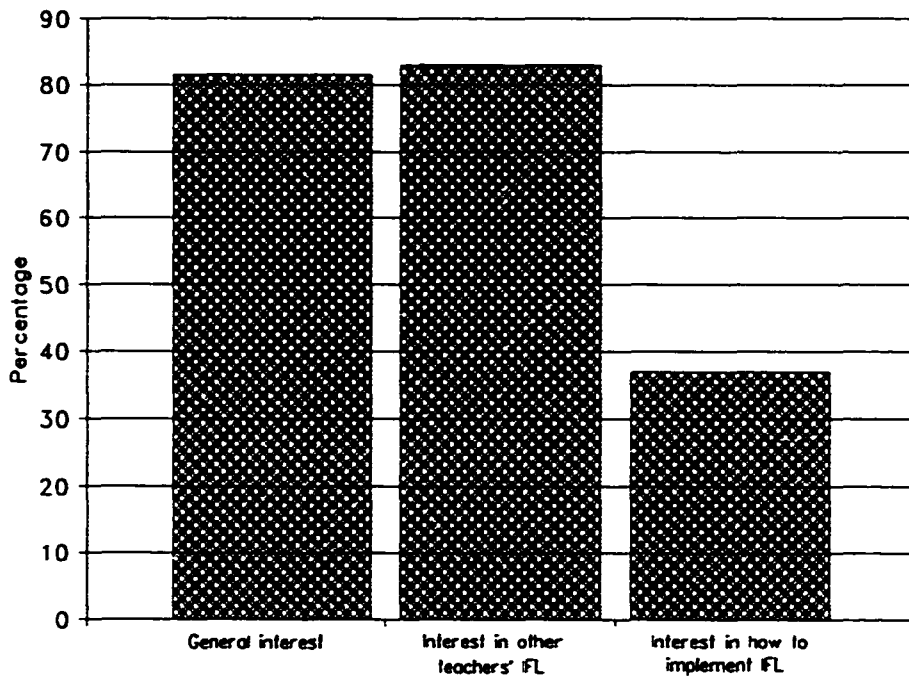


Figure 7. Teacher general interest in IFL, interest in experiences of other colleagues, and interest in implementation requirements.

level 3 were interested in making the IFL they were accomplishing more coherent. Teachers in levels 4 and 5 were interested in better methods or ideas on the implementation of particular aspects of their subject.

Teacher Planning for Deliberate Implementation of Integration of Faith and Learning

Findings From the Questionnaire

Two statements from the questionnaire had to do with the preparation for the deliberate integration of faith and learning: Statement 9 ("I have decided to deliberately implement integration of faith and learning for the coming year") and statement 14 ("I had planned to integrate faith and learning this year"). As summarized in Table 22, 87.8% of the respondents expressed that they had

planned some IFL for their subjects, and 89.3% affirmed that they would introduce IFL in the following year's course plans.

Table 22

Teacher Planning of Deliberate Implementation

Statement	"Very true"	"Somewhat true"	"Not true"
"I have decided to deliberately implement IFL for the coming year" (n=93)	61.3%	28.0%	10.7%
"I had planned to integrate faith and learning this year" (n=90)	55.6%	32.2%	12.2%

Findings From the Interviews

Teacher interviews

All the interviewed teachers categorized in levels 4 and 5 (a total of 11 out of 49 interviewed teachers) reported that they had planned IFL. They supported the planning as a means of remembering the themes and activities they wished to accomplish. Out of the 18 interviewed teachers categorized at level 3, 15 had somewhat incorporated IFL in the course plan, whereas the remaining 3 explained that they deliberately integrated without any structured planning.

Student interviews

Students perceived the difference between planned and unplanned IFL. I found that students tended to perceive the planned IFL and the spontaneous IFL as a dichotomy. For them, planned integration was structured and boring, whereas unplanned integration was spontaneous and interesting. "When teachers bring a lot of Bible verses and planned additional readings, it is because they would not

remember them all by heart,” explained a student from school 1, and “this kind of integration is boring,” he continued. “I think these relationships should be spontaneous, because if it was planned it would not be so interesting,” stated a student in school 6. “I have the idea that teachers plan it in their objectives, but they carry out the relationship according to what is happening,” expressed a student in school 3.

Summary of Teacher Planning of Integration of Faith and Learning

Data from the questionnaire revealed that more than half of the teachers had planned the IFL they were accomplishing. Teacher interviews and course plans supported that only teachers who were deliberately implementing IFL in the formal curriculum had included IFL in their planning, particularly those in levels 4 and 5.

Relationship Between Teacher Planning of IFL and Levels of Implementation

A close relationship between the planning of IFL and implementation is evident. Teachers whose course plans did not include IFL were not deliberately implementing it. Teachers at levels 4 and 5 usually included IFL at the unit level, whereas teachers at level 3 usually included IFL only in the general objectives. In most cases, a careful plan (objectives, activities, evaluation) seems to be the most effective implementation method as long as students active participation in the integration.

Teachers Management Concerns

Findings From the Questionnaire

Eight statements in the questionnaire were related to different management concerns. Statements 2 (“I am concerned about having enough time to organize myself each day”) and 15 (“I am overwhelmed with other things that I have little time for integration of faith and learning”) were related to time available to do the

task, whereas statement 17 ("I would like to have more information on time and energy commitments required to integrate faith and learning") was concerned with not only time but energy needed to accomplish IFL.

Statements 4 ("I would like to know what my superiors think of my implementation of integration of faith and learning") and 8 ("I would like to know who makes the final decision in case our school decides to implement integration of faith and learning") described teachers' concerns about decision making and leadership. Concern of a potential tension between IFL and their teaching activity was presented in statement 5 ("I am concerned about conflict between my interest in integration of faith and learning and my many responsibilities"). Statements 11 ("I am concerned about my inability of manage what the integration of faith and learning requires") and 12 ("I would like to know specifically how my teaching is supposed to change if I implement the integration of faith and learning") pictured concerns about ability and the changing process of implementation.

Table 23 shows that in general teachers did not have strong management concerns. What appeared to concern most teachers was the opinion of their superiors about the IFL they were accomplishing. More than 45% of the teachers (48.4%) were "very concerned" and 36.1% were "somewhat concerned" in this regard. These two categories combined showed a total of 84.5% of teachers who manifested that they would like to know the opinion of their superiors regarding the IFL they are implementing. The smallest management concern expressed by teachers was related to the tension between IFL and their teaching. Forty-eight percent of the respondents stated that they were not concerned at all, and only 11.9% of teachers expressed being very concerned.

Findings From the Interviews, Documentation, and Field Notes

Research on effective schools corroborates the findings of Hall and his colleagues and has proven that school administrators are crucial to success (Fullan,

Table 23

Teacher Management Concerns (N=104)

Statement	"Very concerned"	"Somewhat concerned"	"No concern"
"I would like to know what my superiors think of my IFL" (n=97)	48.4%	36.1%	15.5%
"I would like to know who makes the final decisions in case our school decided to deliberately implement IFL for the coming year" (n=77)	42.8%	37.7%	19.5%
"I would like to have more information on time and energy commitments required to integrate faith and learning" (n=84)	39.3%	44.0%	16.7%
"I would like to know specifically how my teaching is supposed to change if I implement IFL" (n=83)	36.1%	47.0%	16.9%
"I am concerned about having enough time to organize myself each day" (n=83)	26.4%	54.0%	19.6%
"I am concerned about my inability of manage what the IFL requires" (n=80)	20.0%	48.8%	31.2%
"I am overwhelmed with other things that I have little time for IFL" (n=75)	18.7%	49.3%	32.0%
"I am concerned about conflict between my interest in IFL and my many responsibilities" (n=67)	11.9%	40.3%	47.8%

1992). Each principal has a conception of his or her role; these conceptions vary from principal to principal, and from school to school. Teachers' and students' concerns also varied not only from individual to individual but from school to school. However, I found that patterns of concern in the different schools can be treated together. Therefore, management concerns are presented by school to show the forces that promote the differences among settings.

School 1

School 1 is situated in a big city with a middle- to high socioeconomic class student body. The concern most emphasized by teachers, administrators, and students was the high proportion of non-Seventh-day Adventist students. For the first 3 years of high school, the proportion of non-SDA students is about 40%, but increases dramatically in the last 2 years to 70% or 80%. An unspoken goal of the school is to prepare students during the first 3 years of high school to move them to a SDA boarding school for the last 2 years of high school. The school conducts field trips to several SDA boarding schools for 10th-grade students, and encourages students to attend there. The purpose of this promotion is to move young people away from the big city, and to provide them with a more appropriate environment for integral development. Of course, SDAs are more likely to move, whereas non-SDA students are more likely to continue their education at school 1. Teachers and administrators pointed out that the implementation of IFL is more difficult with a large proportion of non-SDA students. SDA students in the last 2 years of high school felt the overwhelming pressure of non-SDA students. However, non-SDA students reported that they valued the Christian environment of school 1.

A number of teachers (4) were concerned with the departmentalization of the curriculum, and were planning to approach some classes from an interdisciplinary viewpoint the following year. Literature, history, music, and geography teachers were planning to organize a pilot project in teaching their subjects from an interdisciplinary perspective. One of the purposes of this interdisciplinary approach was the implementation of IFL.

Bible teachers expressed their concern regarding the Bible textbook. They considered that the current one was addressed more to SDA students. The same concern was also expressed by administrators and SDA students who explained how the SDA Bible textbook provoked negative reactions in non-SDA students.

Administrators were pleased with how Christian education—particularly in the informal and hidden curriculum—transcended the lives of students and reached their families and communities. However, they felt that IFL could be improved in the formal curriculum.

School 2

School 2 is located in a medium-size city, and houses 137 students. Although it had been operating for only 5 years, the current principal was its third principal. More than half of the student population and one-third of the teachers were not Seventh-day Adventists. However, every interviewed student highly appreciated the value of the Christian education the school offered.

The principal's main concern was to involve non-SDA teachers and students in the spiritual mode of the school, and to maintain Christian standards. He considered himself as the school's spiritual leader. As a result of the Christian testimony of the school community during the current year, two teachers and six students had joined the Seventh-day Adventist Church. Although the principal was pleased with the results of IFL in the informal and hidden curriculum, he was concerned with the implementation of IFL in the formal curriculum. At the beginning of the school year, he invited a guest speaker to give some guidance on the implementation of IFL. As a result, IFL appeared in most of the course plans—at least as general objectives. However, the principal recognized that he needed to know more about how to promote effective implementation.

The teachers' work climate was pleasant. Teachers' personal concerns accompanied their interests in IFL and the level of implementation. However, the main concern teachers presented was how to motivate a teacher who rejected the implementation of IFL in the formal curriculum.

School 3

School 3 is a boarding school that includes all levels of education. The high-school level comprises about 400 students, and the totality of teachers and at least 80% of students are affiliated with the Seventh-day Adventist Church.

Although the administrative level of the school is encompassed by the principal, vice-principal, and curriculum consultant working cooperatively, each had different goals and concerns regarding IFL. All of the goals that the principal set for himself before assuming his responsibility had already been accomplished.

However, these goals did not include IFL in the formal curriculum, an issue that is not a close interest of his. His main personal concern was finding new goals as a leader. The vice-principal's major concern regarding IFL was the low spirituality of teachers and students, which affected IFL at all levels of the curriculum. On the other hand, the curriculum consultant was concerned with her lack of knowledge of the implementation of IFL in the formal curriculum, because it was only her second year in the school, and she had come from a non-Christian educational background.

Teachers' concerns varied according to their level of implementation. Teachers who were implementing IFL were concerned about better methods to improve their integration, as well as the indifference of their colleagues who were not implementing. This inhibited a cooperative approach to integration. On the other hand, teachers who were not implementing IFL were concerned with the lack of support from the administration to promote IFL.

Students did not feel closely identified with this school. Although they identified the integration implemented by several teachers, 3 students explained that what they had expected would be done in implementing IFL in some subjects had not been accomplished.

School 4

School 4 is a small boarding school in a country that is proud of not having any religious attachment. Atheism is predominant. More than half of the students and one-third of the teachers are not affiliated with the Seventh-day Adventist Church. This school seemed overwhelmed with urgent problems that somehow eclipsed any concern regarding IFL. During the interview, the principal did not mention any particular interest or concern regarding the implementation of IFL. "At this time, the accomplishment of IFL in the formal curriculum rests in the teachers' decisions," explained the principal.

In general, teachers were too concerned with the fragile economic situation of the school and the country, and with the lack of support from the administration to be interested in IFL. "I know that IFL is a priority, and has to do with the purpose of the school, but we have too many things going wrong here, and I do not know who is ready to think of IFL now," observed one teacher. Seventh-day Adventist teachers were concerned about their non-SDA colleagues, who not only were not informed about the IFL that the school supported, but sustained other philosophical positions. They were also concerned with the high number of non-SDA students (most of them not practicing Christians of any denomination) who made the implementation of IFL more difficult. Teachers who were not implementing IFL were concerned with potential restrictions from the government regarding the inclusion of a relationship between faith and the subject, and the indifference from the school administration in promoting IFL. Teachers who were in levels 3 to 5 did not perceive any restriction from the government, and, although they mentioned their preoccupation with the lack of support from the administration, they were more concerned with ways to improve the integration they are accomplishing and with ways to get other colleagues involved.

School 5

School 5 is a medium-size boarding school with about 90% of students and the totality of teachers affiliated with the Seventh-day Adventist Church.

The principal was concerned with infusing students with an integral formation. To accomplish the physical aspect of this holistic integration, the school implemented a successful program in manual training that offered to high-school students the possibility of mastering a manual trade. The spiritual aspect was addressed by the implementation of an outstanding outreach missionary program that involved the voluntary participation of 90 out of 140 boarding students on a weekly basis. As perceived by the principal, two aspects remained a concern—that is, the involvement of the family and the implementation of IFL in the formal curriculum.

A debate on the most appropriate approach to infuse faith in students, particularly in the informal and hidden curriculum, divided teachers into two groups. One group, composed mainly of teachers who were teaching at the school for more than 15 years, emphasized obedience to the Word of God, whereas the second group, composed by teachers with 5 or less years of experience, emphasized the love of God and service. This debate, present in each teacher interview, somewhat eclipsed teachers' concerns on the implementation of IFL in the formal curriculum, particularly for those teachers who were not implementing yet. For teachers in levels 4 or 5, the ongoing debate did not disturb their concerns in approaching the implementation of IFL as a collegial enterprise, or in finding better methods.

School 6

School 6 is a medium-size day school where 50% of students were not affiliated with the Seventh-day Adventist Church. Fifty percent of students were of Japanese descent who lived in a boarding residence in the school, and attended double school services: the regular day school, and a Japanese grade school. This

cultural and religious diversity seemed not to affect the implementation of the integration of faith and learning. The country does not present any racial conflict, and, furthermore, is highly Christian-oriented. In fact, one of the government's priorities in education is to instill the youth with Christian values and principles.

The principal perceived himself as the spiritual leader of the school, and created a familial environment. Teachers perceived the school as a part of their lives and were willing to come to the school during the weekend to volunteer their time in painting the new fence or preparing decorations for a school program. Two issues that concerned the principal were: (1) the cooperation of the school family in the integral education of students, and (2) the integration of faith and learning in the formal curriculum. Regarding the first issue, the school was sponsoring lectures and activities that involved students' families. To promote the implementation of IFL, the principal was looking for resources both for teacher implementation and for the role of the administrator in supporting and supervising the implementation.

Teachers' concerns varied according to the level of implementation. Those that were not implementing integration were concerned with the acquisition of knowledge on implementation and the availability of resources. Teachers who were implementing integration were concerned with (1) more effective methods for allowing student participation, and (2) the implementation of interdisciplinary teaching that might ease the implementation of IFL into the formal curriculum.

Summary of Teacher and Principal Management Concerns

The questionnaire results show that teachers did not have strong management concerns. Interviews show that the school environment and leadership seem to influence the kind of concerns that affect teachers.

Relationship Between Management Concerns and Levels of Implementation of IFL

Teachers who were implementing IFL were more concerned with the improvement of the integration in their subjects, and in promoting collegial integration than were teachers in levels 0 to 2. Teachers who were not implementing were more concerned with the environment of the school (such as potential government restrictions, and support from the principal) than with their own role in the IFL process. However, the school climate, administrators' vision, and religious background of the country seemed to influence the general degree of implementation.

Teacher Concern on Difficulty of the Subject to Implement Integration of Faith and Learning

Findings From the Questionnaire

One statement on the questionnaire dealt with teachers' perception of the difficulty of implementing IFL in the subject ("It is very difficult or impossible to integrate my faith with the subject I teach"). More than half of the teachers (62.3%) thought that it was not difficult to integrate faith with the subject, and 22.6% found some difficulties in the subject, but only 15.1% perceived great difficulties in integrating faith with the subject they teach. Figure 8 pictures teachers' perceptions on difficulty of the subject, with implementation of IFL.

Findings From the Interviews

Teacher interviews

Mathematics, logic, computers, accounting, and second language teachers perceived that their subjects allowed less opportunities to integrate faith than other subjects. However, teachers' approach to this difficulty varied according to their own interest, creativity, commitment, and previous IFL training. Those teachers who had been trained in implementing artificial integration, generally rejected the possibility of implementation in their subject. Teachers who were interested

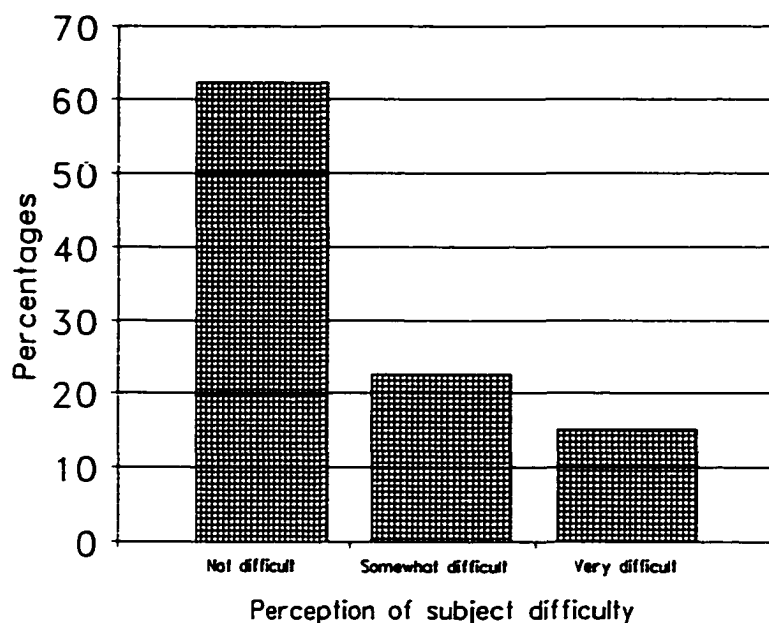


Figure 8. Teachers' perception of subject difficulty based upon the questionnaire in relation to IFL.

in the integration in the formal curriculum looked for creative and natural ways of integration.

Student interviews

Students perceived the difficulty only if the difficulty is perceived by the teacher. In school 1, the mathematics teacher rejected the possibility of integration, and her students verbalized that impossibility. In school 3, a level 5 mathematics teacher was involving students in active integration, and every student believed that mathematics was one of the easier subjects to integrate.

Summary of Difficulty of the Subject

The questionnaire reported that only a few teachers perceived great difficulties in integrating faith and learning in the subject they teach.

Teacher interviews suggested that subjects less related to the human being are perceived as more difficult to integrate with faith. Students' perception of difficulty is directly related to teachers' perception of difficulty.

Relationship Between Difficulty of the Subject and Levels of Implementation

Although subjects less related to the human being are perceived as more difficult to integrate with faith, it seems that the level of implementation is not related to an objective degree of subject difficulty, but to the subjective difficulty as perceived by each teacher.

Development of an Empirically Validated Model of IFL Implementation

An analysis of the questionnaire, interviews, and documents conformed with the hypothetical model. A revision of the hypothetical model included minor changes as follows.

1. The model was subdivided into two large sections: (a) non-deliberate implementation that includes levels 0, 1, and 2, and (b) deliberate implementation that includes levels 3, 4, 5, and 6.
2. The names of the levels were reworded for clarity.
3. The description of each level was refined to express the behaviors of the teachers in a more clear and concise way.
4. The empirically validated model includes excerpts of teachers at each level.

Table 24 shows the empirically validated stage model.

Table 24

IFL Empirical Model

Level of Implementation	Characteristics	Examples
No deliberate implementation		
Level 0: No knowledge No interest	Teacher has little or no knowledge of IFL. Teacher is doing nothing to be involved in IFL. Teacher is not convinced that IFL can be carried out in the subject. Teacher thinks that the subject he/she teaches is not related to faith.	"IFL is only extracurricular; cannot be implemented in the curriculum." "I do not know how to implement IFL." "I have other priorities in mind." "I cannot do it in my subject." "I know how to do it, but I do not have institutional support."
Level 1: Interest	Teacher has acquired or is acquiring information on IFL. Teacher is aware that IFL should be incorporated in his/her classes. Teacher is looking for ways to deliberately implement IFL. Teacher thinks that it may be worthwhile to include IFL in future planning.	"I know very little about IFL." "I do not like superficial integration, thus I am looking for appropriate ways." "I am looking for information on how to implement IFL."
Level 2: Readiness	Teacher knows how to implement IFL in at least some themes. Teacher is preparing to deliberately implement IFL at a definite future time.	"I am going to incorporate some integration I have tried in my course plan." "I have decided to systematically introduce some things I know."

Level of Implementation	Characteristics	Examples
Deliberate Implementation		
Level 3: Irregular or superficial use	<p>Deliberately integrated, but generally unplanned. There is no coherent Christian worldview.</p> <p>Irregular use. Only some themes are integrated throughout the general context of the subject.</p> <p>Superficial use. Use of spiritual content for secular purposes without meaning.</p> <p>Management concerns disturb IFL.</p>	<p>"I know that what I am doing is not the best, but this is a Christian school and I have to do something."</p> <p>"I do not know how to plan IFL."</p> <p>"I only feel confident with two themes: Creation and Evolution."</p> <p>"I do not like planning IFL. I do it consciously but spontaneously."</p>
Level 4: Conventional	<p>There is a stabilized use of IFL, but no changes are made in ongoing use.</p> <p>Syllabus and objectives show IFL in at least some themes.</p> <p>IFL is based on teacher's talking rather than student response.</p> <p>Teacher knows how to implement IFL.</p> <p>IFL shows coherent implementation.</p>	<p>"I include IFL in my unit planning so I can remember to do it."</p> <p>"It is not often that I change what I have planned."</p>
Level 5: Dynamic	<p>Teacher varies the implementation of IFL to increase impact on students.</p> <p>Teacher can describe changes that he/she had made in the last months and what is planned in a short term.</p> <p>Change of strategies and themes according to student needs or interests.</p> <p>Students draw conclusions of IFL.</p>	<p>"I just look at their [students'] faces and know what they are thinking. I encourage them to draw conclusions."</p> <p>"I vary my IFL strategies according to the needs of my students."</p>
Level 6: Comprehensive	<p>Teacher cooperated with colleagues on ways to improve IFL.</p> <p>Regular collaboration between two or more teachers increased impact on students.</p> <p>The whole school (or at least a group of teachers) provided a coherent Christian worldview and emphasized student response.</p>	

Discussion

The results presented above show that teachers were willing to take a look at themselves and to sincerely respond to the questionnaire and participate in a reflective dialogue. Students and principals collaborated in providing their perceptions on teacher implementation of IFL in the formal curriculum. Faith-learning integration in the formal curriculum is not separated from the other facets of integration. Teachers' perception of teaching as a sacred vocation, their commitment to nurture student faith, and their creativity and enthusiasm, as well as personal interest in students integral formation makes the difference in teacher implementation and also in how students perceive teacher integration. A discussion follows of the implementation of integration teachers carried out and the factors related to this implementation.

Implementation of Integration

As expected, teachers distributed themselves in different stages of implementation of integration of faith and learning. Questionnaire results, interviews, and documentation corroborate that there is difference in teachers' implementation of integration, and those differences correspond to different stages of implementation. What Holmes (1975) and Akers (1977) saw as models of teaching may be seen as steps in the growing process of implementing faith.

Joyce and Showers (1980, 1983, 1986), and Hargreaves and Fullan (1992) supported the idea that change and implementation in education is a process that takes time and training. Translation from theoretical knowledge to implementation is not immediate, but requires good training, team work, and support from leadership.

The final objective of teacher implementation of IFL is student integration. Although "the Christian teacher is the interpreter, the meaning maker" (Akers, 1977, p. 9), integration needs to take place in the mind and lives of students to be

completely fulfilled. Thus, student perception, attitude, and participation in integration of faith and learning are essential. On the one hand, students did not perceive IFL of those teachers who were not deliberately implementing integration (levels 0 to 2). Some students perceived integration from level 3 teachers, but they only had a vague idea and were unable to describe specific examples. However, students always perceived integration from teachers in levels 4 and 5. The higher the level, the more intense their perception and enthusiasm due to their active participation. On the other hand, students identified the impossibility of integration in the subjects taught by the few teachers that openly rejected integration in the formal curriculum.

Factors Related to Implementation

The research identified several factors related to teacher implementation of IFL. Knowledge, interest, concerns, and perceived difficulty of the subject appear to be the main factors related to IFL implementation.

Teacher Knowledge of IFL

The knowledge teachers have appears to determine the type of implementation they carry out. This study determined two kinds of knowledge: theoretical knowledge about IFL, and knowledge about implementation of IFL. The first deals with teachers' concept of IFL, teachers' worldview, teachers' knowledge of biblical themes that undergird the subject, and teachers' idea of the expected IFL integration in the subject they teach. Gaebelein (1968) and Holmes (1975, 1977), expressed that a comprehensive concept of IFL that involves all areas of the curriculum facilitate the integration. In fact, this research determined that teachers who included the informal, hidden, and formal curriculum in their concept of integration are in the highest levels of implementation in the formal curriculum.

Most of the current literature on IFL deals with worldviews in general or particular issues of different subjects, but very little deals with a foundational basis

of biblical themes that undergird different subjects; and there is no clear profile of the expected integration that can be accomplished in the diverse academic areas. This lack of knowledge affects teacher implementation. The greater the knowledge on biblical foundational themes that can be integrated, the higher the stage of implementation. Regarding the ideal profile of teacher integration, this research shows that teachers who were not implementing did not think about it, and those who were carrying out integration related the ideal profile to their actual situation, pointing out their perceived weak areas.

Partial or wrong ideas on integration do more harm than good. Teachers who had been trained toward superficial or artificial integration tend to reject it, and do nothing to implement integration in the formal curriculum in order to avoid artificiality. Generally, they tried to develop students' faith with extracurricular activities, or to relegate integration to Bible classes. A balance between all faces of integration, whether in the informal, formal, and hidden curriculum, tends to be accomplished by teachers who have a more comprehensive understanding.

Literature on teacher change and implementation suggests that translation from knowledge to implementation requires good training, team work, and support from leadership (Fullan, 1982, 1992; Hall & Hord, 1984). During the interviews, several teachers expressed how they struggled alone for many years in looking for ways to integrate. New teachers would like to have the advice of experienced ones in this journey. They want to leave this isolated condition to share with others both successes and concerns.

Teacher Interest on IFL

Although the great majority of teachers (81.6%) expressed being interested in IFL, there are differences in their interest in particular aspects of IFL. Many teachers (83%) would like to know the experiences of other colleagues in their integration. Eighty percent of the teachers expressed that they would like to know

what their principal thinks about the IFL they are accomplishing. In spite of this high general interest, only a few teachers (36.9%) were interested in the requirements for implementation. Interest in particular issues of implementation were expressed only by those teachers who were attempting to implement IFL in their classes, whereas those who were not implementing expressed no specific interest for any aspect of IFL.

Students' interest in IFL ran parallel to teacher interest. Student interest was less related to their religious knowledge, background, or affiliation than as to their participation in the IFL process.

Teacher Planning of IFL

Fullan (1992) pointed out that "in order for implementation to succeed, implementators have to gain a clear understanding of what to do and change in order to put the innovation into practice" (p. 31). Thus, clear objectives on all levels (system, school, subject) are important. All the selected schools had a mission statement and had elaborated school goals toward integration, but teachers and students were not familiar with them. Moreover, they were rarely transferred to the subjects. In some schools, school objectives were reviewed only prior to surveys, were and kept in inaccessible places.

The importance of planning IFL is demonstrated by this study. Only teachers who planned IFL were implementing it, and in general those who did not plan were concerned that the planning of IFL would promote artificial integration.

Emergent Teacher Concerns

Although in general teachers did not express major concerns, teachers' concerns varied from school to school and from teachers who implemented IFL to teachers who did not. Common concerns focused on leadership and religious backgrounds of students. Other concerns were common to teachers who implemented IFL and to teachers who did not implement IFL.

Leadership

The leadership of the school is very important in establishing the spiritual mode of the school (Fullan, 1992; Hall & Hord, 1984). Principals' priorities are perceived by teachers. Those who are in levels 0 to 3 tended to recognize the lack of coherence in presenting a Christian worldview in their classes, but attribute that situation to deficiency in promoting integration by the leaders of the school. Nevertheless, teachers in levels 4 or higher seem scarcely to perceive that need.

Teachers are anxious for recognition. Eighty percent of teachers who responded to the questionnaire would like to know what their principals think about the integration they are accomplishing. During interviews, young teachers in particular expressed that they would like to have an evaluation of their teaching, particularly in the area of integration. Even though in faculty meetings principals frequently remind them to integrate, they are not sure that what they are doing is right.

Principals from every selected school described that the main purpose of their school is to provide integral formation from a Christian perspective. But they recognized that they were not quite acquainted with how the integration should look like in the formal curriculum for different subjects. That is why they are only encouraging teachers to do the best they can, and on occasion, invited a guest to provide more ideas. However, principals with high spiritual commitment, who feel they are spiritual leaders as well as academic or administrative leaders, create an atmosphere where teachers are more involved in integration in the formal curriculum. Students in those schools value the Christian atmosphere, and want to remain in that school, regardless of other deficiencies.

The vision the principal has for the school is the guiding light for the school community. The vital role of vision appears in every book on educational and organizational excellence. Both the content and the process of vision building and

implementation are essential for leaders. Although that vision may not have been written in the set of general goals, it is unconsciously perceived. Fullan (1992) stated that "vision building is central to selecting and maintaining focus" (p. 93). If IFL is not a part of the principal's driven goals, it is very unlikely it will occupy a fundamental place in the school.

Cultural environment

Hargreaves (1992) described that teachers' strategies are developed according to the context in which teachers work—"from beliefs, values, habits and assumed ways of doing things among communities of teachers who have had to deal with similar demands and constraints over many years" (p. 217). Each selected school has its own culture of teaching that impacts teachers' beliefs, values, and habits on implementing IFL. For one school, the religious background of the country may be seen as a barrier to integration, whereas for another school it is seen as an advantage. The high proportion of non-Seventh-day Adventist students is perceived as a difficulty to carry out integration, whereas in other schools it is perceived as a positive challenge and benefit. This culture of teaching may be affected by teachers' generational conflicts. School 5's culture of teaching is in conflict because the methods that experienced teachers follow to integrate faith and learning are not followed by new teachers.

Teachers' individual concerns

Teachers' individual concerns varied according to the level of implementation. Teachers who were not implementing were mostly concerned with external factors such as the support of the administration or availability of resources. On the other hand, teachers who were implementing IFL were more concerned with internal factors such as the lack of coherence in the presented worldview, and in the lack of student participation and commitment.

Difficulties of the subject

Gaebelein (1968) expressed that some subjects present more difficulties than others. He said that integration in history, literature, or Bible comes more naturally than in accounting or mathematics. St. Olaf College Self Study Committee (1956) described the law of closeness of relation that illustrated the relation of knowledge to the person. The movement is from the formal, more abstract sciences to the more personal, culminating in theology. Teachers who expressed that IFL is difficult to implement, were in the area of mathematics, business, or computer science—this is the formal sciences. However the majority of interviewed teachers perceived that the subject they teach does not present difficulties in integration. They also perceived that some themes—those they are more interested in, or are more knowledgeable about—they can reach a higher level of implementation.

Summary

This preliminary study demonstrates that teachers implementation of integration in the formal curriculum was in different stages, that went from the absence of implementation to the promotion of a coherent worldview to the students.

Factors such as teacher knowledge, teacher interest, teacher concerns, difficulty of the subject, and the environment and culture of the school affect the implementation accomplished.

The empirically validated model of IFL implementation operationally describes the diverse stages teachers may go through in the growing process of implementation.

CHAPTER V

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

Chapter 1 presented the hypothetical model of teacher implementation of IFL. Chapter 2 presented a review of literature on IFL and teacher change. In chapter 3, I presented the research design, as well as the advantages of using different sources of data and methodologies. Chapter 4 presented the findings and their interpretation. This chapter presents the summary and implications of the study, implications of the findings, and recommendations for further research.

Summary

The summary includes a statement of the problem, a brief review of the literature, and the purpose of the study. The methodology used in the study is reviewed as well as the research findings.

Statement of the Problem

In spite of abundant literature advocating the integration of faith and learning at every level of education, empirical research is lacking on the many ways this integration is accomplished from the teachers' perspective.

Although the daily life of the Christian teacher is the most important manifestation of faith-learning integration, Christian schools and colleges are charged with the responsibility of also making deliberate faith connections throughout the formal or planned program of study.

This dissertation addresses the need for information on the process of deliberate teacher integration of faith and learning in the **formal** curriculum. An

operational model of the process of integration of faith and learning from the teacher's perspective can help the Christian educator better understand how the process is accomplished, and how it might be accomplished more effectively.

Overview of the Literature

Much of the literature reviewed was related to the integration of faith and learning, particularly to the implementation of integration, and to teacher change, especially the CBAM model. These two bodies of literature offered the foundation for the hypothetical model that served as the theoretical framework for this dissertation.

Literature on Integration of Faith and Learning

Literature about how the Christian perspective embraces education uses different terminology. The three foremost terms are "worldviews," "Christian mind," and "integration of faith and learning."

A worldview is defined as a pretheoretical view of the totality of reality based upon faith or beliefs. A worldview is holistic, exploratory, pluralistic, and confessional. An analysis of a worldview allows for the examination of the underlying presuppositions of theories and disciplines, identifies biblical presuppositions, and provides the basis for interdisciplinary studies. Discussion about different worldviews and the importance of the Christian worldview for Christian Education was clearly present.

The concepts of secular and Christian minds were particularly illuminated and analyzed by Blamires (1963, 1988), and Sire (1990). The secular mind is bound to the limits of the temporary life, whereas the Christian mind relates everything, directly or indirectly, to God and the eternal destiny of man as a redeemed child of God. According to Sire (1990), the Christian mind can be reached by being a disciple of Jesus and by approaching knowledge, culture, and history from a

Christian perspective. It is evident that a Christian mind is the prerequisite for integration of faith and learning.

The challenge of integration of faith and learning in all aspects of the curriculum was particularly stressed by Akers (1977), Akers and Moon (1980a, b), De Jong (1989), Gaebelein (1968), and Holmes (1975). These authors agreed that the teacher, the school atmosphere, and the subject are the main ingredients in the integration of faith and learning. A Christian and transparent teacher is required who is able to infuse students with the interest of looking at reality from a Christian integrative viewpoint. The school atmosphere, where extracurricular activities, namely cultural programs, band, choir, athletics, student discipline, chapels, and even brochures that promote Christian education are developed from a Christian perspective, is an essential part of integration.

Individuals and institutions addressed the integration of faith and learning in the formal curriculum. Outstanding early efforts were presented by Beversluis (1971), Davis (1956), Jaarsma (1953), and Steensma and Van Brummelen (1977). Institutional efforts for presenting integration in the formal curriculum were developed by St. Olaf College Self Study Committee (1956), Calvin College Curriculum Study Committee (1970). Other institutions such as the *Christian College Coalition* and *Harper Collins Publishers*, the *Institute for Christian Teaching*, an institution sponsored by the Seventh-day Adventist Church, *Christian Schools International*, *Calvin Center for Scholarship*, *Wheaton College*, and the *Institute for Christian Studies* in Canada are currently producing literature on the integration of faith and learning in subject areas.

Thus, literature on IFL seems to have changed its focus during the last half of this century. Most of the early works emphasized the Christian perspective of education by promoting its inclusion in the curriculum. The later literature exhibits

a defensiveness against the threat of secularism and humanism in Christian schools, and was focused on defending the Christian philosophy.

Literature on Teacher Change

Two large bodies of research have been developed regarding teacher change. One of them deals with the initial resistance to change (Rogers, 1962; Rogers & Shoemaker, 1971), and the other focuses on the use of a consultant as an agent of teacher change (Greiner, 1969; Havelock 1969, 1973).

The factors that motivate teacher change have been studied by Bandura (1977), Ashton and Webb (1986), and Dembo and Gibson (1985). One factor that has been studied is the effect of the classroom environment on teacher change (Aitken & Mildon, 1992; Brophy & Good, 1974; Brophy & Evertson, 1981; Centra & Potter, 1980; Doyle, 1986; Hawley & Rosenholtz, 1984). School context is another factor that affects teacher improvement. The role of the principal in setting goals and communicating them to teachers has been studied by Fullan and Promfret (1977) and Walberg and Genova (1982). The principal's role in supervising and facilitating teachers' work was presented by Fullan (1982) and Leithwood (1992). Experimentation with new strategies of teaching is yet another facilitator of teacher change discussed by Leithwood and Montgomery (1982) and Little (1982); collegiate interaction was presented by Hawley and Rosenholtz (1984), Joyce and Showers (1988), Little (1982), and Showers (1987).

The process of implementation from the teacher's viewpoint was studied by Fullan (1982). Not all teachers approach their tasks in the same way (Armstrong, 1989). Past teaching experiences affect their willingness to change. The longer the teachers have been teaching in the same way, the harder it is for them to change (Huberman, 1988; Sikes, 1992). The willingness to change also affects the process of change. Attempts to impose change on teachers have been notoriously unsuccessful (Huberman & Miles, 1984; Sikes, 1992). Joyce and Showers (1988), in their well-known theory-demonstration-practice-feedback-coaching model, have

shown rather conclusively that staff development is central to instructional change involving teaching models.

Innovations became the mark of progress during the decade of the 60s. However, around 1970, the term "implementation" came into use. Goodlad and others (1970), Sarason (1971), Gross, and others (1971), and Smith and Keith (1971) discussed the fact that innovations were being adopted without anyone asking why. During the 70s and 80s, several models were developed based on curriculum implementation. These models allow curriculum workers to identify particular areas of difficulty in implementation and to develop strategies to deal with these difficulties. Gibb (1978) developed the TORI model which focused on personal and social change. Leithwood (1982) presented the Innovations Profile Model. Hall and Loucks (1978) developed the Concerns-Based Adoption Model (CBAM) which identifies the various levels of teacher concern about an innovation, and how the teacher is using the innovation in the classroom.

Specific Literature that Supported the Hypothetical Model

The hypothetical model was based on two models: Holmes's models of IFL, and Hall and others' model of teacher implementation.

Holmes's (1975) model of ways of teaching—later systematized by Akers (1977) in four models of teaching: disjunction, injunction, conjunction, and fusion—offered the philosophical continuum for integration. These ways range from a total dissociation of subject and faith to a total fusion of faith and the discipline.

Hall and others (Hall and others, 1977; Hall & Hord, 1984; Hall & Loucks, 1978; Hall and others, 1973; Hord and others, 1987) developed the Concerns-Based Adoption Model (CBAM) which focused on two general areas: (1) stages of concerns (SoC), and (2) levels of use (LoU). The second, levels of use, investigated the way teachers were using an innovation, and offered the basis for stages of use of integration.

Purpose of the Study

The purpose of this descriptive study was to develop a model of the process by which teachers integrate faith and learning in the formal curriculum. I validated the model by investigating to what extent the integration of faith and learning was deliberately accomplished by teachers in six Seventh-day Adventist secondary schools located in three South American countries. The study was designed to be exploratory rather than definitive and to suggest ways of more effectively examining the implementation process.

Objectives of the Study

The objectives of this study were the following:

1. To develop a hypothetical paradigm of teacher integration of faith and learning based upon change and IFL theory
2. To describe the extent to which observations of teacher faith-learning integration conform to the paradigm
3. To compare the agreement of teachers' perceptions, students' perceptions, administrators' perceptions, and documentation relative to teacher integration
4. To explore the factors which appear to influence teacher integration
5. To develop a revised and validated model of the process of deliberate teacher integration of faith and learning based upon the above.

Methodology

A multi-method research approach involving questionnaire, interviews, and document analysis was used in order to study the process teachers experience in implementing the integration of faith and learning in their classes. Triangulation occurred as observation from one source was cross-validated with observation from other sources. Responses from the population were also compared against each other as an additional measure of consistency.

Population and Sample

The population for this study was comprised of teachers, students, principals, and curriculum consultants from six Seventh-day Adventist schools located in three South American countries.

The selected schools represent a stratified sample of different geographical regions, school sizes, cultures, and social classes. Each of the three countries has a distinct religio-political tradition. All secondary teachers within a school were given an opportunity to respond to the survey. Approximately 75% of the teachers surveyed (104) returned the questionnaire.

Semistructured interviews were conducted with principals, teachers, students, and curriculum consultants ($n = 96$), and documentation was collected on the integration of faith and learning from the school and teachers. Forty-nine (49) teachers from the six selected schools were interviewed. These teachers were selected on the basis of school size (6-9 per school) and discipline (2-3 from each of the humanities, science and fine/applied arts). Five or six students, representing different grade levels, genders, and religious backgrounds from each school, were also interviewed. The total population of principals and curriculum consultants of the six schools was interviewed.

Procedures

General procedures

To achieve the purposes of this study, the following research procedures were accomplished: (1) development of a hypothetical model of deliberate teacher integration of faith and learning, (2) analysis of teacher integration through different sources (survey questionnaire to teachers, teacher interviews, student interviews, principal interviews, and documentation) and methods (qualitative and quantitative), (3) cross validation, and (4) revision of the theoretical framework.

Techniques and instruments

Development of a hypothetical framework, the extent to which teachers were implementing the integration of faith and learning, was assessed by using (1) a teacher questionnaire, (2) interviews with teachers and students, (3) examination of teacher course plans and related teacher and school materials, and (4) interviews with principals and curriculum consultants.

The teacher questionnaire, which included some demographic items, was designed to assess the levels of knowledge, interest, management concerns, and implementation of IFL. The questionnaire was developed around critical elements of the hypothetical model presented earlier. The content validity of the instrument was established through a panel of experts and a pilot pretest featuring stimulated recall. Interview schedules for teachers included open-ended questions relating to their knowledge, interests, and concerns with respect to IFL. Student interviews were designed to assess their perceptions of what their teachers were doing with respect to IFL, how they participated in the process of integration, and what they perceived was needed to be done still. Interviews with principals and curriculum consultants appraised their vision and support of IFL and what they perceived was actually happening in their schools. Methodologically, the interviews with teachers and students and the examination of course plans and curriculum documents were done to cross-validate the teacher questionnaire.

An empirical model of IFL based on the data obtained through the questionnaire, interviews, and document analysis was developed.

Analysis of data

Data were analyzed from a variety of perspectives. The purpose of this variety was to answer the research questions from different viewpoints, to provide validation to the study, and to take into consideration the complexity of the integration of faith and learning process.

Demographic information from the questionnaire, as well as relationships between demographic variables and statements, was analyzed quantitatively using the SPSS statistical package. Content analysis of the questionnaire revealed each teacher's level of implementation.

Teachers' motivation for integrating faith, their knowledge of implementation, what they are currently accomplishing, and intrinsic factors relating to their level of implementation were analyzed in teachers' interviews. Students' interviews provided students' interpretation of teacher implementation of integration and perceived factors relating to implementation. Principals' and curriculum consultants' interviews provided elements to complete the context in which the integration of faith and learning takes place, along with the perceived vision of the school leaders.

Course plans and school objectives and mission provided elements to assess to what extent the IFL was accomplished.

Summary of Findings

To validate the hypothetical model of teacher implementation of IFL and to develop the empirically validated model, the following steps were taken:

1. I described the extent to which observations of teacher faith-learning integration conform to the hypothetical model.
2. I compared the agreement of teachers' perceptions, students' perceptions, administrators' perceptions, and documentation relative to teacher integration.
3. I explored the factors which appear to influence teacher integration. After the presentation of findings and analysis of data.
4. I revised and empirically validated the model of the process of deliberate teacher integration of faith and learning.

Hypothetical Model of Integration

The hypothetical model of teacher integration presented in chapter 1 (pp. 12, 13) describes seven stages of teacher implementation that goes from the non-use, non-interest, to the teacher implementation that promotes student involvement in the integration process, and coordinates efforts toward a collegial integration in order to provide a cooperative effort toward a coherent Christian worldview.

Teacher Implementation of Integration

Sixty-five percent of the teachers who answered the questionnaire perceived that they were consciously integrating faith in the formal curriculum. However, they were implementing in different degrees. Two-thirds of the responding teachers during the current year had done at least something to change and improve the way they were implementing IFL. Ninety-six percent of responding teachers reported that they considered students' attitudes during the implementation of IFL, but only 68% of them reported that they paid attention to students' opinions. Few teachers (27.5%) were constantly evaluating the impact of their IFL implementation on students' lives, and only 35.2% felt that they were consistently motivating students to participate in the IFL process. Regarding collaboration among teachers, very few teachers were involved in collegial efforts to integrate faith and learning in their classes. About 45.8% of responding teachers have met regularly with other teachers to discuss IFL, and 41.4 % coordinated their efforts to improve the IFL in their school.

Interviews and document analyses corroborated with the findings from the questionnaire, and confirmed that teachers distributed themselves along a continuum of IFL implementation.

Factors Related to Teacher Implementation of Integration

Several issues seem to have an impact upon the phenomenon of modeling IFL teacher implementation: teacher knowledge of the meaning and implementation of IFL, teacher interest in IFL, teacher planning of IFL, teacher concerns, and difficulty of the subject.

Teacher knowledge

Results from the survey questionnaire show that half of the teachers perceived they knew very well what IFL was, and 39% knew how to implement biblical principles into the subjects they taught. Interviews confirmed this statement. Almost every teacher could elaborate a definition of IFL, but these definitions varied. Some emphasized integration in the hidden curriculum, others emphasized integration in the formal curriculum, whereas a few presented a balance among all phases of integration. In general, teachers were able to mention at least one Christian principle that undergirded their subject, but they had very little knowledge on how this integration should be accomplished in the planning and classroom experience.

Teacher interest

Questionnaire findings on teacher interest in integration of faith and learning indicated that the immense majority of teachers (81.6%) expressed their general interest in IFL as well as their curiosity as to how other colleagues were implementing IFL (83%). However, less than half of teachers were interested in knowing the requirements for implementation (36.9%). Teacher interest varied from teachers who were implementing integration to teachers who were not implementing. Those who were in stage 3 or higher were interested in resources, requirements, methodologies, and techniques to improve their integration, whereas

those who were not implementing only expressed a general interest in the IFL concept.

Teacher planning of IFL

Questionnaires reported that more than half of the teachers have planned the IFL they were accomplishing. Teacher interviews and course plans supported the conclusion that only teachers who were deliberately implementing IFL in the formal curriculum had included IFL in their planning, particularly those in level 4 and 5.

Teacher management concerns.

Questionnaire results show that teachers did not have strong management concerns. Interviews suggest that the school culture and leadership provided by the administration of the school influence the posture of the teachers toward IFL.

Teacher difficulty of the subject.

Questionnaire data indicated that only a few teachers perceived great difficulties in integrating faith and learning in the subject they taught. Teacher interviews suggested that subjects less related to the subjective human condition (i.e., mathematics and business) are perceived as more difficult to integrate with faith. Students' perception of difficulty appears directly related to teachers' perception of difficulty.

Revised Model of Teacher Implementation

The revised model of teacher implementation presented in chapter 4 (pp. 138, 139) is the empirically validated version of the hypothetical model. It includes seven stages of teacher implementation: the first three stages correspond to the non-implementation, and the last four stages correspond to the deliberate implementation, with a continuum from superficial integration to dynamic collaboration.

The following conclusions about the teacher implementation of faith and learning may be obtained from the findings of this study:

1. Teachers integrate faith in the formal curriculum in different stages of implementation.
2. Factors such as knowledge of IFL, interest in IFL, concerns and difficulty of the subject influence the degree of teacher implementation of IFL.
3. Planning of IFL at the school and teacher level is directly related to the degree of teacher implementation.
4. Student involvement in the IFL process is an essential but frequently overlooked ingredient of IFL implementation.
5. Support from the school administration and the parochial educational system provide direction and incentive for teacher IFL implementation
6. National, social, and cultural forces, along with the religious background of students and teachers, all directly or indirectly influence teacher IFL implementation.

Implications

This study's purpose was to develop and validate a model of teacher implementation of IFL in the formal curriculum. The findings of this study support the notion of a stage model of implementation in which teachers find themselves in a continuum from no-interest, no-use, to dynamic collaboration. Knowing where they fall in the continuum may help teachers assess where they are in the growing process and may aid them in finding ways to improve their own integration development. The model may also help educational leaders, whether at the school level or in the support system, to devise effective ways to work with teachers at each stage of IFL.

Teacher knowledge of IFL is an important factor in the implementation process of integration. Therefore, when teachers have a clear and comprehensive

idea of IFL that involves all areas of curriculum (whether informal, formal, or hidden), they are more likely to place IFL in the formal curriculum and to provide a more coherent Christian perspective of the subject, avoiding artificial or superficial integration.

The lack of knowledge of biblical themes and values that undergird the subject, as well as the lack of an ideal profile of teacher implementation of IFL in the subject area, negatively affects teachers' visions of the potential of integration.

The close relationship between the theoretical knowledge of IFL and the knowledge of IFL implementation demonstrates that teachers need both a thorough orientation of the IFL concept as well as training in a wide repertoire of strategies to accomplish IFL. Unenlightened training can have a negative impact on IFL interest and implementation.

General interest is not sufficient to motivate teachers to implement IFL, and teacher classroom homilies on faith-learning topics are not sufficient to motivate students' interest in IFL. Teacher interest in the specifics of IFL implementation is higher in teachers with only 1-5 years of teaching experience than with experienced teachers.

Student interest in IFL is only awakened when students are actively involved in the IFL process, can find the relationship of faith to reality meaningful and natural, and can see the coherence of a coherent integration.

School philosophy and objectives provide direction to the school community as long as these objectives are clearly stated, are widely embraced by the whole school community, and are reflected in teachers' course objectives. School objectives that include IFL but are not translated to teachers' objectives for subjects are ineffectual.

Planning IFL is directly related to the level of teacher implementation. Although some teachers declared they were implementing IFL without including IFL

in their course plans, that implementation was not perceived by students, and these teachers were designated no higher than level 3. On the other hand, teachers who introduced IFL in their course plans were classified as levels 4 or 5, according to the student participation, and their integration was always perceived by students.

Almost half of the teachers who answered the questionnaire were very concerned with their superiors' opinions of how teachers should implement IFL. School administrators that support IFL in the formal curriculum, and provide feedback to teachers regarding the IFL implementation, have schools with lively spiritual environments.

The social, cultural, economic, and religious environments of the school provoke different teachers' and administrators' concerns which affect the implementation of IFL. Some of these factors can be controlled by administrators, the support system or teachers themselves, and other factors are inherent to the school; therefore strategies of implementation need to deal with these factors and to take advantage of them.

The inherent nature of the subject area is a recognized factor that sometimes affects IFL implementation. Not all subjects present the same possibilities for integration, but in spite of the difficulties of the formal sciences, each subject can be treated coherently from a Christian perspective. A sizable majority of teachers felt the nature of their disciplines allowed for IFL integration.

In spite of the difficulty of the subject, the Christian worldview can permeate all subjects. Any discipline, in being connected with reality, is based upon philosophical assumptions, which are basically related to the Hebrew paradigm (the totality of the truth) or the Greek paradigm (the dualism between sacred and secular). The model proposed in this study attempts to present in a simple way the complex process of teacher implementation, oriented toward the Hebrew paradigm.

Although the teacher implementation model may be used as self-assessment means, the model is not intended to be used as a summative evaluation tool by an administrator or school board.

Recommendations

One of the main purposes of this study was to develop and validate a model of the process of teacher implementation of IFL. Because of the lack of empirical research on the many ways teachers conduct the implementation of IFL, this study is preliminary and incipient in nature, and can be used as a basis for more work in the field. I offer some recommendations for future research and for practitioners and the parochial school system.

For Future Research

This study intends only to open the research and discussion on implementation of integration of faith and learning. Much needs to be done in the area of implementation of integration.

1. Replications of this study on other levels of education could allow for a more extended validity for its findings, and therefore for a higher level of generalization for its conclusions. Replications of this study among other religious and cross-cultural settings could provide data to corroborate the validity of the IFL implementation model across denominations and cultures.

2. Research needs to be done in the area of training for implementing integration. It is necessary to determine how training on implementation affects teacher integration over time, if there are differences in training models for different levels of education, and to search for the most effective training for helping teachers improve in the implementation process.

3. The effects of the leadership in the teacher implementation process should be studied. It is necessary also to carefully determine the role of school administrators and the support system in the teacher implementation process. This

could help principals provide the culture and climate for implementing IFL in their schools. It is necessary also to find effective ways to train principals to assume leadership in the IFL process.

4. This study suggests that the questionnaire designed for this research was reliable. However, the instrument needs to be refined and applied to a larger population to increase its validity, so that it can become a practical tool for teacher self-assessment.

5. Interviews with teachers and principals indicated lack of clarity regarding the ideal integration for different subjects. Research needs to be done in looking for the main components of integration within the structure of different disciplines.

6. A study should be conducted about the student involvement in integration of faith and learning, and how students internalize integration (Holmes, 1994). A model of student stages of integration may assist students in the ever-growing process of thinking Christianly, and teachers may assist in guiding them through the process.

For Practitioners and the Parochial School System

1. Since the degree of teacher implementation of IFL is mainly determined by teachers' knowledge and interest, it is imperative that teachers have the interest, skills, and resources necessary to implement IFL. Administrators and curriculum consultants should promote the planning of IFL at subject level as well as provide follow up and support systems to teachers implementing IFL.

2. Parochial educational planners at all organizational levels should spell out a concise philosophy, set of goals, and essential biblical themes that undergird the subjects. This would provide guidance in preparing textbooks and curriculum materials for each level thus making the task easier for classroom teachers. Denominationally prepared curriculum materials based upon biblical principles and

values may help teachers to translate faith into action. In addition, a tentative ideal profile of integration for each subject can serve as a guide for teacher integration.

3. Regional or national teachers conventions planned by the parochial school system can help build awareness on IFL, as well as provide opportunities for interchange of ideas. Notwithstanding the advantage of regional or national conventions, IFL concerns should be dealt with at the school level due to the particular concerns that affect each school.

4. Administrators should disseminate school objectives to the whole school community and encourage discussion and eventual consensus as to the role of faith and learning. Having done this, the school staff should be expected to translate these objectives to their particular areas.

5. Administrators and the support system should provide opportunities for teamwork within the school and with colleagues of other schools that support a similar value system, in order to provide students with a coherent Christian vision.

6. Teachers should focus their strategies for integration in promoting active student participation in the IFL process. They should coordinate their efforts trying to provide a coherent Christian worldview.

7. The model developed in this study as well as the questionnaire was not intended to be used as a tool for summative evaluation. However, I encourage teachers and administrators to use the model and the questionnaire as a teacher self-evaluation tool or as an anonymous corporate-awareness instrument.

Although the model represents stages of teachers' deliberate implementation, it is neither sequential nor hierarchical. It is not designed to be used as a developmental model, but as a descriptive model that describes the kind of IFL that the teacher is accomplishing. It may happen that a particular teacher fits in more than one level simultaneously, depending upon the subject or the theme he/she is teaching.

8. Teachers, administrators, and policy makers should recognize that although this study was concerned only with the formal curriculum, the integration of faith and learning in the formal curriculum does not substitute the implementation in the hidden and informal curricula. They should be aware that in the dynamics of the school there is a subtle interplay of all aspects of the curriculum. This complex and symbiotic relationship impacts on the implementation of IFL.

Thus, the implementation of faith and learning should comprise all aspects of curriculum, involve all members of the school community— administrators, teachers and students— and transcend to the wider community.

APPENDIX A
INSTRUMENTS

ENGLISH VERSION OF THE QUESTIONNAIRE

***Questionnaire
for SDA high school teachers
in the Austral Union***

Introduction

Although integration of faith and learning is a fine concept, questions arise about how teachers are to carry it out. Of course, every teacher unconsciously communicates faith through day-to-day interaction with students. But at present very few teachers have in place a comprehensive program for integrating Christian faith in all their classes.

This questionnaire attempts to determine your thoughts about integrating faith and learning in your classroom. There is no right or wrong answers.

For this questionnaire, we define integration of faith and learning as follows.

**Integration of faith and learning
refers to the process of consciously
presenting the subject from a biblical
perspective, highlighting the
Christian values of its content.**

The questionnaire consists in two parts:

- Part I: Your thoughts on integration of faith and learning
- Part II: Demographic questions about yourself.

All the individual responses are surely kept in confidence. You do not have to place your name on this form.

Please read carefully the directions and answer all the questions. Your input on integration of faith and learning is surely appreciated.

PART I: Your thoughts about integration of faith and learning

Directions: Many items on this questionnaire may be irrelevant to you at this time, especially if you haven't been able to integrate faith and learning in a deliberate way. If the item is irrelevant, please circle "N" on the scale. Other items will represent those concerns you do have, in varying degrees of intensity, and should be marked higher on the scale. For example:

This statement is very true of me at this time.	N	1	2	3	4	5	6	7
This statement is somewhat true of me now.	N	1	2	3	4	5	6	7
This statement is not at all true of me at this time.	N	1	2	3	4	5	6	7
This statement seems irrelevant to me.	N	1	2	3	4	5	6	7

Please respond to the items in terms of your present concerns, or how you feel about your involvement or potential involvement with integration faith and learning.

N	1	2	3	4	5	6	7
irrelevant, does not apply	Not true of me now		somewhat true of me now		very true		

- | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. I don't even know what integration of faith and learning is. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I am concerned about having enough time to organize myself each day. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. I have a very limited knowledge of how to integrate biblical principles in my classes. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I would like to know what my superiors think of my integration of faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I am concerned about conflict between my interest in integration of faith and learning and my many responsibilities. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. I would like to know how the integration of faith and learning affects students. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I am not concerned about integrating faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I would like to know who makes the final decisions in case our school decides to implement integration of faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. I have decided to deliberately implement integration of faith and learning for the coming year. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. I would like to know what resources are available if we decide to adopt integration of faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. I am concerned about my inability of manage what the integration of faith and learning requires. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. I would like to know specifically how my teaching is supposed to change if I implement the integration of faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. I would like to tell other departments or persons about the benefit of the integration of faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. I had planned to integrate faith and learning this year. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|
| 15. I am overwhelmed with other things that I have little time for integration of faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. I would like to know what the implementation of faith and learning will require of me. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. I would like to have more information on time and energy commitments required to integrate faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. I would like to know what faculty in other schools are doing in this area. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. I would like to know how a deliberate integration of faith and learning will improve what I am are doing now. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. It is very difficult or impossible to integrate my faith with the subject I teach. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

This year if you were able to consciously incorporate faith and learning in your academic activities (yearly plan, your course content and/or your classes) please select your preferences in the scale according to your situation for items 21-32; otherwise, go to the next page.

- | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|
| 21. This year I have founded some other approaches to integration of faith and learning than might work better than what I have used before. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. I am concerned about students' attitudes when I integrate faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. I feel sufficient prepared to help other faculty at my school integrate faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. I am trying new ways to integrate faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. This year I met regularly with other faculty in discussion on implementing the integration of faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. I am continuously evaluating the impact of my faith and learning on students. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. This year I have revised my instructional approaches in order to integrate faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. I am modifying my approach to integrating faith and learning based upon the experiences of my students. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. This year I made efforts to inspire students to do their part in integrating faith and learning. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30. This year I coordinated my effort with other teachers to maximize the effect of the integration of faith and learning at my school. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 31. I have examined ways to enhance or improve the integration of faith and learning in my classes. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32. I have used feedback from students to change my implementation of faith and learning in my classes. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Please look over P

PART II: Demographic questions.

1. Check your group age.
☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ +60
2. Check your teaching experience in years.
☐ 1-5 ☐ 6-9 ☐ 11-15 ☐ 16-20 ☐ +20
3. Circle only the grades and subjects you are currently teaching.

Bible	8	9	10	11	12
Language Arts	8	9	10	11	12
Math	8	9	10	11	12
Social Studies	8	9	10	11	12
Sciences	8	9	10	11	12
Music	8	9	10	11	12
Art	8	9	10	11	12
Physical Education	8	9	10	11	12
Psychology/Philosophy	8	9	10	11	12
Economics/Accounting	8	9	10	11	12
4. Are you full time or part time teacher?
☐ Full time ☐ Part time
5. Are you a Seventh-day Adventist?
☐ Yes ☐ No
 If yes, how long?
 _____ years.
6. Did you receive SDA education?
☐ Yes ☐ No
 If yes, write the number of years per level
 Elementary level _____ years
 Secondary level _____ years
 Undergraduate level _____ years
 Graduate level _____ years
7. Did you grow in a SDA home?
☐ Yes ☐ No
8. What is your highest degree and where did you get it?
 Degree: _____
 Institution: _____
9. Did you take any complementary degree or classes on theology or religion?
 Yes ☐ No ☐
 If yes, What degree or classes did you attain?

 Where?
10. Did you attend to any inservice, seminar or lecture on how to relate biblical principles into the subject(s) you teach? ☐ Yes ☐ No
 If yes, please list them.
11. Have you learned about integration of faith and learning by other means?
 Yes ☐ No ☐ If yes, What means?
☐ colleagues ☐ reading
☐ educational leaders ☐ other

SPANISH VERSION OF THE QUESTIONNAIRE

ENCUESTA
a docentes
de escuelas secundarias adventistas
de la Unión Austral

Introducción

Aunque la "integración fe-enseñanza" es un magnífico concepto, surgen algunos interrogantes sobre cómo los docentes la implementan en sus clases. Por supuesto, cada profesor inconcientemente comunica su fe en la interacción diaria con sus alumnos, pero hasta el presente muy pocos llevan a cabo un programa completo de integración de la fe en todas sus clases.

El propósito de este cuestionario es determinar sus intereses, preocupaciones y logros en relación con la integración fe-enseñanza. No hay respuestas correctas ni equivocadas.

A los efectos de la encuesta,

la integración fe-enseñanza en una
asignatura se logra cuando se enfocan
sus principios o postulados desde una
perspectiva bíblica, y se destacan los
valores cristianos de su contenido.

El cuestionario consta de dos partes:

- Primera parte: Sus ideas sobre la integración fe-enseñanza
- Segunda parte: Datos demográficos

Todas las respuestas individuales son confidenciales. No escriba su nombre en este formulario.

Por favor lea cuidadosamente las instrucciones y responda todas las preguntas. Sus respuestas serán muy apreciadas.

PRIMERA PARTE: Sus ideas sobre integración fe-enseñanza.

Instrucciones: Los enunciados que aparecen a continuación abarcan desde el desconocimiento total del tema hasta muchos años de experiencia en su aplicación. Si alguna declaración no se aplica a su situación actual, encierre en un círculo "N" en la escala. Para los enunciados que representen sus preocupaciones o intereses, márquelos en la escala de acuerdo con el grado de intensidad. Por ejemplo:

En este momento esta declaración es muy cierta para mí.	N	1	2	3	4	5	6	7
En este momento esta declaración es más o menos cierta para mí.	N	1	2	3	4	5	6	7
En este momento esta declaración no es cierta para mí.	N	1	2	3	4	5	6	7
Esta declaración no se aplica a mi situación actual.	N	1	2	3	4	5	6	7

Por favor escoja las alternativas de acuerdo con sus preocupaciones o intereses actuales o con lo que sentiría ante una eventual posibilidad de integrar su fe en sus clases.

N	1	2	3	4	5	6	7
No se aplica a mi situación actual	No es cierto para mí en este momento		Más o menos cierto en este momento			Muy cierto para mí en este momento	
1. Ni siquiera sé qué es integración fe-enseñanza.	N	1	2	3	4	5	6 7
2. Me preocupa no tener cada día suficiente tiempo para organizar mi trabajo.	N	1	2	3	4	5	6 7
3. Tengo un conocimiento muy limitado de lo que significa integrar los principios bíblicos en mis clases.	N	1	2	3	4	5	6 7
4. Me gustaría saber qué piensan mis superiores de mi integración fe-enseñanza.	N	1	2	3	4	5	6 7
5. Siento que hay tensión entre mi interés en la integración fe-enseñanza y mis responsabilidades como docente.	N	1	2	3	4	5	6 7
6. Me interesa saber cómo la integración fe-enseñanza afecta a los alumnos.	N	1	2	3	4	5	6 7
7. En este momento no me interesa la integración fe-enseñanza.	N	1	2	3	4	5	6 7
8. Me gustaría saber quién va a tomar las decisiones en caso que mi colegio decida implementar deliberadamente los principios bíblicos en las asignaturas.	N	1	2	3	4	5	6 7
9. He tomado la decisión de implementar intencionalmente la integración fe-enseñanza en las asignaturas que enseñe el próximo año.	N	1	2	3	4	5	6 7
10. Me gustaría conocer qué recursos hay disponibles si decidiera adoptar sistemáticamente la integración de mi fe en mis clases.	N	1	2	3	4	5	6 7
11. Me preocupa mi falta de habilidad para manejar lo que la integración fe-enseñanza requiere.	N	1	2	3	4	5	6 7
12. Me gustaría saber en qué cambiará mi forma de enseñar si implemento la integración fe-enseñanza.	N	1	2	3	4	5	6 7
13. Me gustaría contarle a otros los beneficios de la integración fe-enseñanza.	N	1	2	3	4	5	6 7
14. Este año había planificado incorporar intencionalmente mi fe en mis clases.	N	1	2	3	4	5	6 7

- | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|
| 15. Estoy demasiado sobrecargado/a con otras cosas y tengo muy poco tiempo para la integración fe-enseñanza. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. Me gustaría saber qué requeriría de mí la integración fe-enseñanza. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. Me gustaría saber cuánto tiempo y energía hay que disponer para implementar la integración fe-enseñanza. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. Me gustaría saber qué están haciendo otros profesores adventistas en esa área. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. Me gustaría saber en qué medida una integración intencional será mejor que lo que estoy haciendo ahora. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. Es muy difícil o imposible integrar mi fe en las materias que enseño. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Si este año ud. ha podido conscientemente incorporar su fe en sus actividades académicas, ya sea en su planificación anual, en sus programas y/o en sus clases, por favor elija las alternativas correspondientes a los enunciados 21 al 32 que mejor se adecuen a su situación; de lo contrario continúe en la página siguiente.

- | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|
| 21. Este año he encontrado formas más efectivas de integrar la fe en mis clases que las que he usado anteriormente. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. Tomo en cuenta las actitudes de mis alumnos cuando integro mi fe en mis clases. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. Estoy en condiciones de ayudar a otros profesores en su integración de fe y enseñanza. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. Estoy probando nuevas formas de aplicar la integración de mi fe en la enseñanza. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. Este año en forma regular he intercambiado ideas con otros profesores de mi institución respecto de la integración fe-enseñanza. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. Continuamente estoy evaluando la influencia de mi integración sobre mis alumnos. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. Este año he revisado las estrategias que uso para mejorar la integración de mis creencias con las asignaturas que enseño. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. Basado en las experiencias con mis los alumnos, voy modificando el modo en que integro la fe y la enseñanza. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. Este año he tratado de motivar a mis alumnos para que hagan su parte en la integración fe-enseñanza. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30. Este año he coordinado mis esfuerzos con los de otros colegas de mi colegio para que logremos mayores resultados en la integración fe-enseñanza. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 31. He examinado nuevas maneras de realzar o mejorar la integración fe-enseñanza en mis clases. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32. He tomado en cuenta la opinión de los alumnos para mejorar el modo en que integro fe-enseñanza. | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Dé vuelta la página, por favor ☞

SEGUNDA PARTE: Datos demográficos

1. Marque con una "x" el grupo de edad al que ud. pertenece.
☐ 20-29 años ☐ 30-39 años ☐ 40-49 años ☐ 50-59 años ☐ 60 años o más
2. Marque con una "x" sus años de experiencia docente.
☐ 1-5 años ☐ 6-10 años ☐ 11-15 años ☐ 16-20 años ☐ más de 20 años
3. Marque con un círculo los años y las materias que actualmente está enseñando.

Biblia	1	2	3	4	5
Lengua/Literatura	1	2	3	4	5
Matemáticas	1	2	3	4	5
Historia	1	2	3	4	5
Geografía	1	2	3	4	5
Ciencias	1	2	3	4	5
Música	1	2	3	4	5
Arte	1	2	3	4	5
Educación Física	1	2	3	4	5
Filosofía/Psicología	1	2	3	4	5
Economía/Contabilidad	1	2	3	4	5
Otra: _____	1	2	3	4	5
4. Marque con una "x" su carga académica en esta institución
☐ Tiempo completo ☐ Tiempo parcial
5. ¿Es ud. adventista del séptimo día?
☐ Sí ☐ No
Si lo es, ¿cuántos años hace que es adventista?
_____ años.
6. ¿Recibió educación adventista?
☐ Sí ☐ No
Si recibió educación adventista indique cuántos años en cada nivel.
Nivel Primario _____ años
Nivel Secundario _____ años
Nivel terciario _____ años
Nivel de postgrado _____ años
7. ¿Creció ud. en un hogar adventista?
☐ Sí ☐ No
8. ¿Cuál es su título de mayor grado, y dónde lo obtuvo?
Título: _____
Institución: _____
9. Ha tomado ud. algún curso o clase en teología o religión?
☐ Sí ☐ No
Si así fuera, ¿qué cursos o clases tomó?

¿Dónde?

10. ¿Asistió ud. a alguna jornada, seminario o conferencia sobre cómo relacionar los principios bíblicos con la/s asignatura/s que ud. enseña? ☐ Sí ☐ No
Si así fuera, consígnelos por favor.

11. ¿Ha recibido información sobre la integración fe-enseñanza por otros medios?
☐ Sí ☐ No Si así fuera, ¿por qué medios?
☐ colegas ☐ lecturas
☐ líderes de la educación adventista ☐ otros medios :

¡Muchas gracias por completar esta encuesta!

TRANSMITTAL LETTER

Universidad Andrews, 4 de octubre de 1993

Apreciado profesor:

Ante todo vaya con ésta un saludo cordial y fraterno. El motivo de la presente es solicitarle tenga a bien completar la encuesta adjunta que es uno de los instrumentos de recolección de datos que he elaborado en función de mi tesis doctoral, aquí en la Universidad Andrews.

El propósito de mi investigación es estudiar el currículo en las escuelas secundarias adventistas de la Unión Austral. He seleccionado seis de las doce escuelas secundarias en funcionamiento: Instituto Florida (Buenos Aires), Instituto Francisco Ramos Mejía (Santa Fe), Universidad Adventista del Plata (Entre Ríos), Instituto Adventista del Uruguay (Canelones), Instituto Adventista Juan Bautista Alberdi (Misiones) y Colegio Adventista de Asunción (Asunción).

La encuesta tiene el propósito particular de determinar sus intereses, inquietudes y logros en la integración fe-enseñanza de la(s) asignatura(s) que Ud. enseña. Sus apreciaciones sobre la integración fe-enseñanza tanto como los datos demográficos que le solicito quedarán en estricta confidencialidad. Como lo notaré, no necesita escribir su nombre en el formulario.

Por favor complete la encuesta y entréguela a la persona que se la alanzó tan pronto como sea posible. En unas pocas semanas estaré visitando su colegio para recoger las encuestas y conducir algunas entrevistas. Podría ser que tengamos la oportunidad de conversar personalmente.

Muchas gracias por su ayuda en esta investigación.

Cordialmente,

Raquel de Korniejczuk

ENGLISH VERSION OF TEACHER INTERVIEW SCHEDULE

1. What does IFL mean to you?
2. Do you think that IFL should be included in the formal curriculum? Why?
3. Do you think that IFL should be included in the course plan? Why?
4. Do you know if this school have institutional objectives or mission statement?
Could you mention any of these goals?
5. Do you see any relationship between IFL and the mission of this school?
6. What do you think are the basic Christian/biblical principles or values that
undergird the subject/s you teach?
7. What is the ideal way to integrate faith in the subject/s you teach?
8. To what extent are you accomplishing IFL in the formal curriculum
in the course plans
in everyday planning
in student involvement
regarding non SDA students
regarding time, resources, and organization
regarding government policies
regarding difficulty of the subject
support from administration, colleagues, and the support system
9. Do you have any positive experience regarding IFL? Any frustration?
10. If the parochial school system decide to support you more efficiently, what
would you like to receive?

SPANISH VERSION OF TEACHER INTERVIEW SCHEDULE

1. ¿Qué significa para Ud. integración fe-enseñanza?
2. ¿A Ud. le parece que la integración fe-enseñanza debe formar parte del currículo de la asignatura? ¿Por qué?
3. ¿A Ud. le parece que la integración fe-enseñanza debe estar incluida en los programas de las asignaturas? ¿Por qué?
4. ¿Sabe Ud. si esta escuela tiene objetivos institucionales o declaración de propósito? ¿Podría mencionar alguno de esos objetivos?
5. ¿Ve Ud. alguna relación entre la integración fe-enseñanza y la misión de esta escuela?
6. Según su criterio, ¿cuáles son los principios o valores bíblicos o cristianos que sostienen la/s asignatura/s que Ud. enseña?
7. Según su criterio, ¿cuál es la manera ideal de integrar la fe cristiana en la/s asignatura/s que Ud. enseña?
8. ¿En qué medida Ud. está pudiendo cumplir ese ideal:
en los programas anuales
en la planificación cotidiana
en el involucramiento de los alumnos
con los alumnos no adventistas
con el manejo del tiempo, recursos y cuestiones de organización
con los reglamentos gubernamentales
con las dificultades inherentes a la asignatura
con el apoyo de la administración de la escuela, sus colegas, y el sistema educativo adventista?
9. ¿Tiene alguna positiva experiencia relacionada con integración fe-enseñanza para compartir? ¿Alguna frustración?
10. Si el sistema educativo adventista decidiera apoyarlo más eficientemente con la integración fe-enseñanza, ¿qué le gustaría recibir?

**ENGLISH VERSION OF PRINCIPAL AND CURRICULUM CONSULTANT
INTERVIEW SCHEDULE**

1. What does IFL mean to you?
2. Do you think that IFL should be included in the formal curriculum? Why?
3. Do you think that IFL should be included in the course plan? Why?
4. Do you have institutional objectives or mission statement for this school? Could you mention any of these goals?
5. Do you see any relationship between IFL and the mission of this school?
6. How do you see your role as an administrator of this school?
7. What do you think is the ideal way to integrate faith in the subject/s?
8. To what extent teachers at this school are you accomplishing IFL in the formal curriculum
 - in the course plans
 - in everyday planning
 - in student involvement
 - regarding non SDA students
 - regarding time, resources, and organization
 - regarding government policies
 - regarding difficulty of the subject
 - support from administration, colleagues, and the support system
9. Do you have any positive experience regarding IFL? Any frustration?
10. If the parochial school system decide to support you more efficiently, what would you like to receive?

**SPANISH VERSION OF PRINCIPAL AND CURRICULUM CONSULTANT
INTERVIEW SCHEDULE**

1. ¿Qué significa para Ud. integración fe-enseñanza?
2. ¿Le parece a Ud. que la integración fe-enseñanza debe formar parte del currículo? ¿Por qué?
3. ¿Le parece a Ud. que la integración fe-enseñanza debe incluirse en los programas de las asignaturas? ¿Por qué?
4. ¿Tiene su escuela objetivos institucionales o declaración de propósito? ¿Podría mencionar algunos de esos objetivos?
5. ¿Ve Ud. alguna relación entre la integración fe-enseñanza y la misión de esta escuela?
6. ¿Cómo ve Ud. su rol como administrador de esta institución?
7. ¿Cuál le parece a Ud. que es la forma ideal de integrar fe en las asignaturas?
8. ¿En qué medida los docentes de su escuela están pudiendo integrar fe en las materias curriculares
en los programas anuales
en la planificación cotidiana
en el involucramiento de los alumnos
con los alumnos no adventistas
con el manejo del tiempo, recursos y cuestiones de organización
con los reglamentos gubernamentales
con las dificultades inherentes a la asignatura
con el apoyo de la administración de la escuela, sus colegas, y el sistema educativo adventista?
9. ¿Tiene alguna positiva experiencia relacionada con integración fe-enseñanza para compartir? ¿Alguna frustración?
10. Si el sistema educativo adventista decidiera apoyarlo más eficientemente con la integración fe-enseñanza, ¿qué le gustaría recibir?

ENGLISH VERSION OF STUDENT INTERVIEW SCHEDULE

1. Do you perceive that your teachers relate the subjects with faith/religion?
2. In what classes do you perceive that this relationship is present?
3. Do you perceive these relationships as planned? Why?
4. Do you perceive that your teachers are interested in your responses when they are relating faith with the subject?
5. How you and your classmates participate in relating faith in the subject?
6. Do you think that is appropriate these relationships?
7. What do you perceive are the most effective and interesting ways to accomplish these relationships?

SPANISH VERSION OF STUDENT INTERVIEW SCHEDULE

1. ¿Te parece que tus docentes relacionan las asignaturas con la fe/religión?
2. ¿En qué clases observas que aparecen este tipo de relaciones?
3. ¿Te parece que estas relaciones están planificadas? ¿Por qué?
4. ¿Te parece que tus docentes están interesados en tus respuestas o opiniones cuando relacionan fe con las asignaturas?
5. ¿Cómo participan tú y tus compañeros al relacionar fe con las asignaturas?
6. ¿Te parece que es apropiado relacionar fe con las asignaturas?
7. Según tu criterio, ¿cuáles son las maneras más efectivas e interesantes de llevar a cabo esas relaciones?

**ENGLISH VERSION OF DEMOGRAPHIC INFORMATION FORM
FOR STUDENT INTERVIEWS**

STUDENT #

Demographic information:

1. Age:
2. Grade:
3. How many years in adventist schools?:
4. SDA or non-SDA:
5. How long their parents are SDA?:
6. Participation in church activities:
7. If you can freely choose the school for the next year, where would you attend? Why?

**SPANISH VERSION OF DEMOGRAPHIC INFORMATION FORM
FOR STUDENT INTERVIEWS**

ALUMNO #

Datos demográficos:

- 1. Edad:**
- 2. Año que cursa:**
- 3. Años de educación adv.:**
- 4. Adventista bautizado:**
- 5. Años que los padres son adventistas:**
- 6. Participación en las actividades de la iglesia:**
- 7. Si tú pudieras elegir libremente dónde estudiar, ¿qué colegio elegirías?
¿Por qué?**

APPENDIX B

RAW DATA

CODE SHEET

ID	1-3	ID	
S1	5	Statement # 1 (0: does not apply; 1: not true; 2: somewhat true; 3: very true)	
S2	6	Statement # 2 (idem S1)	
S3	7	Statement # 3 (idem S1)	
S4	8	Statement # 4 (idem S1)	
S5	9	Statement # 5 (idem S1)	
S6	10	Statement # 6 (idem S1)	
S7	11	Statement # 7 (idem S1)	
S8	12	Statement # 8 (idem S1)	
S9	13	Statement # 9 (idem S1)	
S10		14	Statement # 10 (idem S1)
S11		15	Statement # 11 (idem S1)
S12		16	Statement # 12 (idem S1)
S13		17	Statement # 13 (idem S1)
S14		18	Statement # 14 (idem S1)
S15		19	Statement # 15 (idem S1)
S16		20	Statement # 16 (idem S1)
S17		21	Statement # 17 (idem S1)
S18		22	Statement # 18 (idem S1)
S19		23	Statement # 19 (idem S1)
S20		24	Statement # 20 (idem S1)
S21		26	Statement # 21 (idem S1)
S22		27	Statement # 22 (idem S1)
S23		28	Statement # 23 (idem S1)
S24		29	Statement # 24 (idem S1)
S25		30	Statement # 25 (idem S1)
S26		31	Statement # 26 (idem S1)
S27		32	Statement # 27 (idem S1)
S28		33	Statement # 28 (idem S1)
S29		34	Statement # 29 (idem S1)
S30		35	Statement # 30 (idem S1)
S31		36	Statement # 31 (idem S1)
S32		37	Statement # 32 (idem S1)
AGE		39	Age group (1: 20-29 years; 2: 30-39 years; 3: 40-49 years; 4: 50-59 years; 5: 60 years or more)
TEACHEXP		40	Teaching experience (1: 1-5 years; 2: 6-10 years; 3: 11-15 years; 4: 16-20 years; 5: more than 20 years)
BIBLE		42	Bible
LANGUAGE		43	Language/Literature
MATHEMAT		44	Mathematics
HISTORY		45	History
GEOGRAPH		46	Geography
SCIENCE		47	Science
MUSIC		48	Music
ART		49	Art
PHYSICED		50	Physical Education
PHILPSYC		51	Philosophy/Psychology
ECONBUSS		52	Economics/Accounting/Bussiness/ Commerce
OTHER		53	Other course
TEACHLOA		55	Teaching load (1: full time; 2: parcial time)
SDA		56	Seventh-day Adventist? (1: yes 0: no)
SDAYEARS		57-58	Number of years the teacher has been SDA
SDAEDUC		59	SDA education? (1: yes 0: no)
SDAEDELE		60	Number of years in SDA elementary schools
SDAEDSEC		61	Number of years in SDA elementary schools
SDAEDTER		62	Number of years in SDA elementary schools
SDAEDGRA		63	Number of years in SDA elementary schools
SDAHOME		64	SDA home (1: yes 0: no)
DEGREE		66	Degree (0: secondary; 1: tertiary; 2: master or equivalent; 3: doctoral)
INSTITUT		67	Institution (1: SDA; 2: State; 3: Private non-SDA)
THEOLOGY		68	Theological studies? (1: yes; 0: no)
THEOCOUR		69	(1: BA in Theology; 2: Theological Complementation; 3: some courses)
WORKSHOP		70	IFL workshops and seminars? (1: yes; 0: no)
IFLINFOR		71	IFL information? (1: yes; 0: no)
IFLINFCO		72	IFL information sources: colleagues
IFLINFLE		73	IFL information sources: SDA leaders
IFLINFRE		74	IFL information sources: readings
IFLINFOT		75	IFL information sources: others

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SPSS INSTRUCTIONS TO PROCESS DATA FILE

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/ART 'teaches Art' /PHYSICED 'teaches Physical Education' /PHILPSYC
'teaches Philosophy or Psychology' /ECONBUSS
'teaches Economy or Bussiness or Commerce' /OTHER 'teaches other courses'
/TEACHLOA 'teaching loading' /SDA 'Seventh-day Adventist?' /SDAYEARS
'Number of years have been SDA' /SDAEDUC 'SDA Education?' /SDAEDELE
'Number of years of SDA elementary education' /SDAEDSEC
'Number of years of SDA secondary education' /SDAEDTER
'Number of years of SDA tertiary education' /SDAEDGRA
'Number of years of SDA graduate education' /SDAHOME
'Raised at a SDA home?' /DEGREE 'Maximum degree obtained' /INSTITUT
'Institution where degree was obtained' /THEOLOGY 'Studied Theology'
/THEOCOUR 'Level of theological studies' /WORKSHOP 'Attended IFL workshops?'
/IFLINFOR 'Got IFL information' /IFLINFCO 'IFL information from colleagues'
/IFLINFLE 'IFL information from SDA leaders' /IFLINFRE
'IFL information from readings' /IFLINFOT
'IFL information from other sources'.
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3 'very true' /AGE 1 '20-29 years' 2 '30-39 years' 3 '40-49 years'
4 '50-59 years' 5 '60 years or more' /TEACHEX 1 '1-5 years' 2 '6-10 years'
3 '11-15 years' 4 '16-20 years' 5 'more than 20 years' /TEACHLOA
1 'full time' 2 'partial time' /SDA sdaeduc SDAHOME THEOLOGY WORKSHOP
IFLINFOR 1 'yes' 0 'no' /DEGREE 0 'secondary' 1 'Tertiary'
2 'master or equivalent' 3 'doctoral' /INSTITUT 1 'SDA' 2 'State-run'
3 'private non-SDA' /THEOCOUR 1 'BA in theology'
2 'Theological Complementation' 3 'Some Courses'
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APPENDIX C
CROSS-VALIDATION CHART

Teachers questionnaire	Teachers interview	Student interview	Planning & other documents	Conclusion
ID 1 History High knowledge High interest High Prep No management concerns High Prep --- Low change Moderate student involment Moderate collaboration	IFL: model & content High rel. History-faith law and prophets Bible as history book Teacher thinks is easy and constant. More difficult in some themes. All examples are for freshman	IF11, 1 year How religion was before and now. We discuss. Teacher explains. We have to think about it.	Out of 4 units 3 have IFL objectives, for 1 year.	Level 4 Routine
ID 2 Geography Moderate knowledge High interest No preparation No difficulties in the subject --- No implementation	IFL: relate themes with Bible. It is easy with creation and the signs of the end of the world. Frustration with planning. Management concerns: time, programming Planned only in creation	IF9, 5 year (creation, flood) IF10, 2 year IF12, 5 year	Reading and discussion of "The flood" and " After the flood" in PP	Level 3 Irregular use
ID 3 Mathematics Low knowledge Low interest Low preparation No management concerns Some difficulties in the subject --- Low change Moderate change No collab	IFL: Biblical application in the subject No possible to plan because of students Difficulties in Math Principle: God gives intelligence to understand IFL is extracurricular activity: discussion.	IF9 5 year: Teacher speaks to us, it cannot be related. IF12 5 year: We sing, pray, prayer request. Math cannot be done.	Nothing	Level 0 No knowledge, non use

ID 4 Accounting Moderate knowledge Moderate interest No preparation Some management concerns Decision making Some difficulties in the subject -- Moderate change Moderate student	IFL: Christian principles IFL is the same in the public school she teaches Implementation: values No ideal Little change according to students Easy in Law class, difficult in Economic Sc. No planning	Nothing	Nothing	Level 3 Irregular or superficial use
ID 5 Keyboarding Low knowledge High interest No preparation Some manag. concerns Difficulties in the subject --- No implementation	IFL: In Bible class, week of prayer. Rejection of artificial IFL. High interest Implementation: Teacher is creating her own workbook. Use of proverbs for typing Stress on values, without recognizing as IFL: responsibility, self-stem, respect.	Nothing	Nothing	Level 1: Orientation

ID 6 Computer Sc. Accounting Low knowledge Moderate interest Moderate preparation Low management concerns Some difficulties in the subject --- No implementation	IFL: Modeling. Teacher do not know how to plan, or how should be planned. Some values She has a notebook with Bible verses that she uses when she can. No knowledge of ideal . High interest	Nothing	Objective: value the importance of the intelligence given by God to create and program a computer	Level 3: Irregular
ID 7 Biology Low knowledge Moderate interest Low preparation No management concerns No difficulties in the subject --- No implementation	IFL: No definition Teacher knows on creation and ecology. Students bring IFL. Teacher reads a spiritual reading provided by the school. IFL is spontaneous	RM7 3year: readings RM2 5year: readings	Value God's creation and man as a part of His creation. Help to develop physical, social and spiritual aspects of students	Level 1 Orientation
ID 8 Physical Education Moderate knowledge High interest High preparation Some manag. concerns Time Superior opinion No difficulties in the subject --- No change Low student involvement	IFL: Modeling. It is to show to students how important is Jesus in their lives. Prayer at the beginning Little homilies Recent baptized. Teacher is astonished by good students' behavior. No knowledge of Christian principles P.E. IFL.	Nothing	Nothing	Level 1 Orientation

ID 9 Accounting High knowledge High interest High preparation Some manag. concerns Time-energy No difficulties in the subject ... No implementation	If'L: no definition Devotional readings. Prayer Some themes: Economy in the Bible; Moses and economy, biblical principles	RM2 4year: Devotional readings	General objectives: morning reading and Christian values	Level 3 Irregular use
ID 10 Philosophy High knowledge High interest High preparation Some manag. concerns Change in teaching No difficulty in the subject ... High change High student involvement No collaboration	If'L: Modeling. Faith is something to live, not to teach. Teacher presents different philosophical positions. Emphasis on freedom to choose. Knowledge of biblical principles: Example on truth	RM2 4year: Teacher gives different philosophic position. Example on truth	Nothing	Level 3 Irregular use
ID 11 History, Civic Educ. High knowledge High interest High preparation Low manag. concerns No difficulty in the subject ... Moderate change Low student involvement No collaboration	If'L: Modeling. Relate naturally values and Christian principles Planned and spontaneous Curricular and extra-curricular activities related to the class and If'L. Examples on different strategies according to students Civic: family	RM7 3year: History: persecution, the end of the time. Civic educ.: family	General and specific objectives	Level 5 Refinement

ID 12 Bible High knowledge High interest High preparation Some manag. concern Time, decision making No difficulty --- High change High student involvement Low collab.	IFL: Is transmit a right idea about God. Examples of change in strategies according to students, particularly SIDA students that know everything	RM7 3year	General and specific objectives	Level 5 Refinement
ID 13 Philosophy High knowledge High interest High preparation Low management concerns No difficulty --- Moderate change High student involvement Moderate collaboration	IFL: Value transmission Teacher perceive that is easy in education, and hard in logic. Teacher is looking for new ways. Coordination with psychology and Cs fair. Concern with a coherent worldview	RM6 5 year	Critical perspective of philosophies from the Christian viewpoint. Value divine principles in education	Level 5 Refinement
ID 14 Language High knowledge High interest High preparation Low manag. concerns Superior opinion No difficulty -- High change High student involvement Moderate collaboration	IFL: integral formation Concrete examples in selected themes Concrete examples of student change based on selection of material Teacher offer support to a new teacher	UAP7: Remember 2 years ago, a poem and IFL. UAP9: IFL in the objectives	Clearly and detailed planned: Objectives Activities Evaluation	Level 5 Refinement

ID 15 Language Low knowledge High interest High preparation Some manag. concerns Superior opinions, change in teaching No difficulty ... No implementation	IFL: Bible class, week of prayer, select literature material. No recognized the help of an experienced teacher	Nothing	Nothing	Level 1 Orientation
ID 16 Biology and Geography High knowledge High interest High preparation Some manag. concerns Difficulty in the subject ... Moderate change Moderate student involv. No collaboration	IFL: Rel. Bible verses with the class. There is no coherence between institutional objectives and the practice, so it is hard to work with students and present a coherent worldview High interest in change. Very creative teacher	UAP6 2year: creation UAP13 4year: Verses on tests UAP15 2year: Verses on tests	No planning available Teacher gave me tests	Level 3 Irregular use

ID 17 Biology and Geography Moderate knowledge High interest Low preparation High manag. concerns Superior' opinion, time, Tension, decision making, ability, change teaching No difficulty --- No implementation	IFL.: Integrate Christian principles. Teacher thinks he is not prepared, does not have enough information. No planned IFL Teacher mention God as creator and something on ecology	Nothing	God as creator Ecology as stewardship	Level 1 Orientation
ID 18 History, Civic Education Moderate knowledge High interest Moderate preparation High manag. concerns Time, superior opinion Decision making No difficulty in the subject --- Moderate change Moderate student involv. No collaboration	IFL.: Integral formation Some themes: prophesies, law, 10 commandments. Comparison: Christ-A. Magnum. Paul-Nero Some issues are planned Changes based upon SIDA student reaction	UAP6: Creation, Christ-A. Magnum UAP8: Politics and religion UAP9: Current problem	General objectives Prophesies Hebrew religion Christ - A. Magnum	Level 4 Routine

ID 19 Computer Sciences Moderate knowledge High interest No preparation Some mang. concerns Ability, change teaching High difficulty in the subject ... No implementation	IFL: Select text to use in computer Some Christian values teacher does not recognize as IFL.	Nothing	Nothing	Level 1 Orientation
ID 20 English High knowledge High interest High preparation Moderate management concerns Change teaching, superior opinions No difficulty ... Moderate change Low student involvement No collaboration	IFL: modeling IFL in Christian songs, Bible stories, Bible verses Teachers points some change for next year	Nothing	Nothing	Level 3 Irregular use

ID 21 Philosophy, Bible Moderate knowledge High interest High preparation Moderate manag. concerns No difficulty ... Moderate change Low student involvement No collaboration	IFL.: Christian worldview Implementation on Anthropology and creation. No planned yet. Teacher relates biblical principles at the end of an unit. Teacher is planning to include what he has tried.	No mention	Philosophy: To elaborate critical, judgement on philosophical perspective. Bible: To have their own opinion on how God is with people	Level 3 Irregular use
ID 22 Geography High knowledge Moderate interest High preparation No management concerns No difficulty in the subject ... Low change Low student involvement No collaboration	IFL. Christ as creator. Emphasis on spontaneous implementation. Example: creation, evolution	No mention	Nothing	Level 3 Irregular use

<p>ID 23 Astronomy Moderate knowledge High interest Some manag. concerns Moderate preparation Superior opinion, Decision making No difficulty --- Low changes Low student involvement No collaboration</p>	<p>IFI.: To take spiritual or moral values Astronomy: God as creator Art: It is more difficult. Teacher is not art teacher. Computer: moral values, ethics.</p>	<p>IAU12, 4 year: Student remember that at the beginning of the school year, teacher made some relationships.</p>	<p>Astronomy: God as creator of the universe. Value the great love of God in looking the universe.</p>	<p>Level 3 Irregular use</p>
<p>ID 24 History High knowledge High interest Moderate preparation No management concerns No difficulty in the subject --- High change High student involvement Low collaboration</p>	<p>IFI.: Christian perspective of the subject. Creation, democracy. Teacher changes relationship according to student interest. Teacher is concerned with student salvation. Teacher is concern with being objective as a historicist, and at the same time give the Christian perspective.</p>	<p>IAU11: Teacher has her own opinion, ideas on evolution. I mean, she knows all the history, and also gives her opinions, Christian opinions. IAU15: Teacher talked about the man at the beginning, on how the man appeared.</p>	<p>Help to discover permanent values. To serve to God, the country .</p>	<p>Level 5 Refinement</p>

ID 25 Applied Arts High knowledge High interest Moderate preparation No management concerns No difficulty in the subject ... Moderate change Low involvement Low collaboration	IFL: Relate biblical principles with manual work. Work as a part of integral formation of student Emphasis on excellence and service	IAU12	Objectives: Service and integral development of the student.	Level 4 Routine
ID 26 Music Moderate knowledge Moderate interest Low preparation Some management concerns Time, Superior ability Some difficulties in the subject ... Moderate change	IFL: Spontaneous relation between faith and music. No conscious implementation Some knowledge of Christian principles and what can be done	No mention	Nothing	Level 0 Non use

ID 27 Art and English High knowledge High interest High preparation High management concerns Superior opinion, decision making No difficulty in the subject --- Low change Low student involvement No collaboration	IFL: No definition. Relation between Bible and Arts: use of biblical motives for art works. Teacher is conscious that is not implementing now. Teacher decides to do better next year. No mention on IFL in English	No mention	No course plan available. Teacher provided the researcher with a document on IFL authored by him on IFL in other subjects	Level 2 Preparation
ID 28 Psychology and Phylosophy High knowledge High interest Low preparation Some management concerns Time, Superior opinion Change in teaching No difficulty in the subject --- Moderate change Moderate student involv. No collaboration	IFL: Christian worldview. Anthropology. Critique from Christian perspective. No student participation	No mention	To defend the believe in God in an unbelieving world	Level 3 Irregular use

ID 29 Business Moderate knowledge Moderate interest Moderate preparation Some management concerns Tension, Decision making No difficulty in the subject --- Moderate change Moderate student involv. No collaboration	IFL: Modeling. Look the subject through Christian lenses. Planned only in general objectives. Examples: 10 commandments in Law classes. Economy in heaven	IJB\7, 4year: Economy: Teacher speaks on the Bible some times, and when we are quiet, teacher start with the class.	General objectives	Level 3 Irregular use
ID 30 Biology High knowledge High interest High preparation Some management concerns Decision making, ability No difficulty in the subject --- Moderate change Moderate student involv. Low collaboration	IFL: Cs. and creation No planned. Teacher does not believe in planned IFL. Implementation: unplanned but conscious. Reject to artificial IFL.	IJB\3, 1year IJB\4, 2year IJB\5, 4year Teacher spoke on the Bible, until the voice tone was nice. IJB\8, 4year. In Biology talks about other themes.	The titles for the units were related to IFL, but no objectives or activities on that.	Level 3 Irregular use

ID 31 Music Low knowledge High interest High preparation Low management concerns No difficulty in the subject ... Low change Low student No collaboration	IFL: Compare the subject with our beliefs and values Examples on IFL outside the subject. Selection of music are based on the words of the songs. There is very little to be done in music: Teacher is concerned with extracurricular activities in IFL.	CAIDA6, 2year: Does not remember	No mention	Level 0 Non use
ID 32 Biology High knowledge Moderate interest Moderate preparation Some management concerns Superior opinion, Decision making No difficulty in the subject ... Moderate change Moderate student involv. Low collaboration	IFL: Relate the course program with biblical principles. Modeling Planned in general, spontaneous in particular Creation, origin of the universe	CAIDA4, 3year: creation, evolution CAIDA6, 2year CAIDA7, creation, evolution We look at the Bible. CAIDA8, 4year: creation, evolution	Creation: E White readings	Level 4 Routine

ID 33 High knowledge High interest High preparation Some management concerns Time, ability, Change in teaching No difficulty in the subject --- Moderate change Moderate student involv. Low collaboration	IFL: Relate subject with Bible. It is not possible to relate everything. Creation Teacher is looking for new ways. Once that something is tried, is repeated the next year	CADA4, 2year: family CAFA6, 2year	General objectives Creation Law Bible as history	Level 4 Routine
ID 34 Mathematics Moderate knowledge Moderate interest No preparation Few management concerns Superior opinion Difficulty in the subject --- No implementation	IFL: Reject to relate church doctrines to the subjects. Reject to superficial and artificial IFL. Modeling Spontaneous implementation	CADA11, 6: in Math cannot be done	No mention	Level 0 Non use
ID 35 Guarani Language Low knowledge High interest Low preparation High management concerns Time, superior opinion Tension, decision making No difficulty in the subject --- No implementation	IFL: Use our beliefs. Use of Bible verses in Guarani Teacher asks for collegiate work	No mention	General objective: Know God's word.	Level 3 Superficial Use

APPENDIX D
BASIC CHRISTIAN PRINCIPLES THAT UNDERGIRD SOME SUBJECTS

BASIC CHRISTIAN PRINCIPLES THAT UNDERGIRD DIFFERENT SUBJECTS

VISUAL ARTS

- Art is from God and is given to human beings to help them discover their identity, their worth, and their creative potential. Artistic sensitivity is heightened as we love God and acknowledge Him.
- The environment reflects some of the beauty of its original creation and the ugliness caused by sin.
- Art is influenced by moral and religious principles, and it relates our perceptions of our environment to these principles.

BIBLE

- Bible provides coherence for all school subjects.
- Bible study not only addresses Adventist doctrinal beliefs, but it relates to lifestyle issues, ethical decision making, interpersonal relationships, reasons for faith, and personal religious experience.
- The central focus of Bible teaching is the development of relationships. The most important one is with God.
- The test of effectiveness of Bible teaching is in the lifestyle that the Bible student adopts. Bible teaching encourages a sound application of biblical principles in one's relationships and life.

COMMERCIAL STUDIES

- God is the creator and owner of all matter.
- How Christians view God and His relationship to humans carries implications for the way Christians think the commercial world should operate.
- An important principle of Scripture for the commercial world is justice, which is expressed partly in good stewardship of resources, in the value of individuals, and in integrity.

ENGLISH

- The ability to use language is God-given.
- Growth in language is integral to personal development and to realizing God-given individuality and humanity.
- Language enables us to know God and communicate our understanding of Him; explore and expand our private and public worlds; to organize our experience; and to form, recognize and reveal our values.

GEOGRAPHY

- The study of the natural environment assumes the existence of a Creator-God who has created all existing matter. Through studying this creation students are taught to appreciate not only its aesthetic beauty but also the need to live in harmony with the Creator's laws.
- The study of the environment should lead to a heightened awareness of their responsibilities in caring for their created environment. The environment has been partially destroyed because of the alienation of man and nature after sin entered the earth.
- Geographical study emphasizes the importance of the concepts of restoration and stewardship.

MUSIC

- God intends music to be one means of fostering spiritual development. Musical appreciation and expression help comprise the worship and faith that draw us to Him.

- Music helps us develop abilities such as creativity, communication, and emotional expression. Music education forms an indispensable part of our aesthetic development.
- It is a gift from God, designed to give us balance, to uplift us, and to lead us to Him.

MATHEMATICS

- Everywhere in nature are evidences of mathematical relationships. These are shown in ideas of number, form, design and symmetry, and in the constant laws governing the existence and harmonious working of all things. Through the study of these laws, ideas, and processes, mathematics can reveal to students some of God's creative attributes.
- When students learn mathematical processes, axioms, and laws, they may be enabled to more clearly identify God's design and handiwork in nature. It shows Him to be a God of system, order, and accuracy. He can be depended upon. His logic is certain. By thinking in mathematical terms, we are actually thinking God's thoughts after Him.

PHYSICAL EDUCATION

- Man was originally created in God's image, but this image has been marred by sin. Physical education focuses on the restoration of God's image in mankind through emphasizing a group of health-related concepts.
- Our bodies are temples of God where the Holy Spirit dwells. As we build health and its attendant positive attitudes, this process influences both our quality and world view, and God's image becomes strengthened in us.
- Through a healthy lifestyle and the knowledge of health and fitness, we can become positive models who glorify God and make Him more real to others.

SCIENCE

- Science is the continuing search for understanding about ourselves and our changing physical and biological environment. Therefore, rightly interpreted and understood, it must be consistent with ultimate truth, which is embodied in God and glimpsed by man.
- Science provides the student with an opportunity to explore and attempt to comprehend the order and perfection of the original creation.
- Science provides scope for the utilization of man's logical thought and creativity in investigating God's creation and the laws by which it is governed and maintained.

SOCIAL STUDIES

- God is the central reality that gives meaning to all knowledge.
- There is a conflict between the forces of good and evil in the world; this conflict is reflected in changes to the natural and social environment.

These Christian assumptions were taken from Gaebelain, Frank (1968) and from the South Pacific Division Curriculum Frameworks (1991).

APPENDIX E
RESULTS FROM THE QUESTIONNAIRE

PERCENTAGES OF TEACHERS RESPONSES TO THE QUESTIONNAIRE

Statement #		"Does not apply"	"Not true"	"Somewhat true"	"Very true"
1	(n=102)	41.2	29.4	18.6	10.8
2	(n=100)	13.0	17.0	47.0	23.0
3	(n=103)	26.2	29.1	35.9	8.7
4	(n=102)	4.9	14.7	34.3	46.1
5	(n=100)	33.0	32.0	27.0	8.0
6	(n=102)	2.0	2.9	20.6	74.5
7	(n=99)	50.5	40.4	61	3.0
8	(n=95)	18.9	15.8	30.5	34.7
9	(n=100)	7.0	10.0	26.0	57.0
10	(n=100)	7.0	3.0	25.0	65.0
11	(n=101)	20.8	24.8	38.6	15.8
12	(n=101)	17.8	13.9	38.6	29.7
13	(n=100)	8.0	6.0	29.0	57.0
14	(n=98)	8.2	11.2	29.6	51.0
15	(n=101)	25.7	23.8	36.6	13.9
16	(n=100)	31.0	44.0	9.0	16.0
17	(n=100)	33.0	37.0	14.0	16.0
18	(n=101)	1.0	1.0	15.8	82.2
19	(n=101)	2.0	3.0	28.3	66.7
20	(n=101)	47.5	32.7	11.9	7.9
21	(n=71)	8.5	11.3	47.9	32.4
22	(n=74)	0.0	4.1	27.0	68.9
23	(n=68)	16.2	23.5	44.1	16.2
24	(n=69)	7.2	8.7	49.3	34.8
25	(n=70)	21.4	32.9	32.9	12.9
26	(n=69)	8.7	20.3	43.5	27.5
27	(n=68)	11.8	14.7	51.5	22.1
28	(n=72)	4.2	8.3	47.2	40.3
29	(n=71)	2.8	18.3	43.7	35.2
30	(n=70)	28.6	30.0	34.3	7.1
31	(n=71)	9.9	15.5	53.5	21.1
32	(n=73)	13.7	17.8	45.2	23.3

APPENDIX F
CHI SQUARE TEST FOR RELATIONSHIP BETWEEN SELECTED
DEMOGRAPHIC VARIABLES AND SELECTED
QUESTIONNAIRE STATEMENTS

**CHI SQUARE TEST FOR RELATIONSHIP BETWEEN SELECTED
DEMOGRAPHIC VARIABLES AND SELECTED
QUESTIONNAIRE STATEMENTS**

Demographic variable	Statement #	X ²	df	P
Age	6	6.86166	4	0.14338
	7	0.79852	4	0.93865
	10	3.25531	4	0.93865
	16	4.68046	4	0.32168
	18	4.67980	4	0.32176
	19	2.30941	4	0.67906
Workload	6	5.09170	2	0.15520
	7	0.1381	2	0.99138
	10	0.99865	2	0.80158
	16	3.26681	2	0.35229
	18	1.97054	2	0.57854
	19	2.24432	2	0.52327
SDA member	6	0.72699	2	0.69524
	7	14.94326	2	0.00057
	10	3.00201	2	0.00057
	16	0.64234	2	0.72530
	18	15.87360	2	0.00036
	19	2.54253	2	0.28048
Teaching experience	6	2.26735	4	0.68672
	7	4.85053	4	0.30298
	10	14.25346	4	0.00653
	16	9.84994	4	0.04303
	18	3.75887	4	0.43962
	19	4.89751	4	0.29798
SDA home	6	4.78294	2	0.09150
	7	0.49955	2	0.77898
	10	0.22452	2	0.89381
	16	0.95004	2	0.62187
	18	4.70436	2	0.09516
	19	2.16019	2	0.33956

Studied theology	6	5.74461	2	0.56570
	7	0.53333	2	0.76593
	10	0.25819	2	0.87889
	16	2.21080	2	0.33108
	18	1.68561	2	0.43050
	19	0.77576	2	0.67849
Age	1	4.06624	4	0.39712
	3	11.32783	4	0.23244
Workload	1	5.50459	2	0.06378
	3	6.30334	2	0.04278
Teaching experience	1	3.14498	4	0.53386
	3	3.19994	4	0.52494
SDA member	1	1.09450	2	0.57854
	3	2.91828	2	0.23244
SDA home	1	0.63228	2	0.72896
	3	0.51296	2	0.77377
Studied theology	1	2.15650	2	0.34019
	3	1.68820	2	0.42994

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